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FIRST OF THE EUROPEAN TOURING CONTESTS.

PARIS, March 20.—First of the several important European touring contests for the coming season will be the Sicilian Circuit for the Targo Florio, scheduled to take place May 6 on the Island of Sicily. Chevalier Vincenzo Florio is the organizer of this picturesque event, which will try, in no easy manner, the rugged qualities of a first-class touring car. As a preliminary to

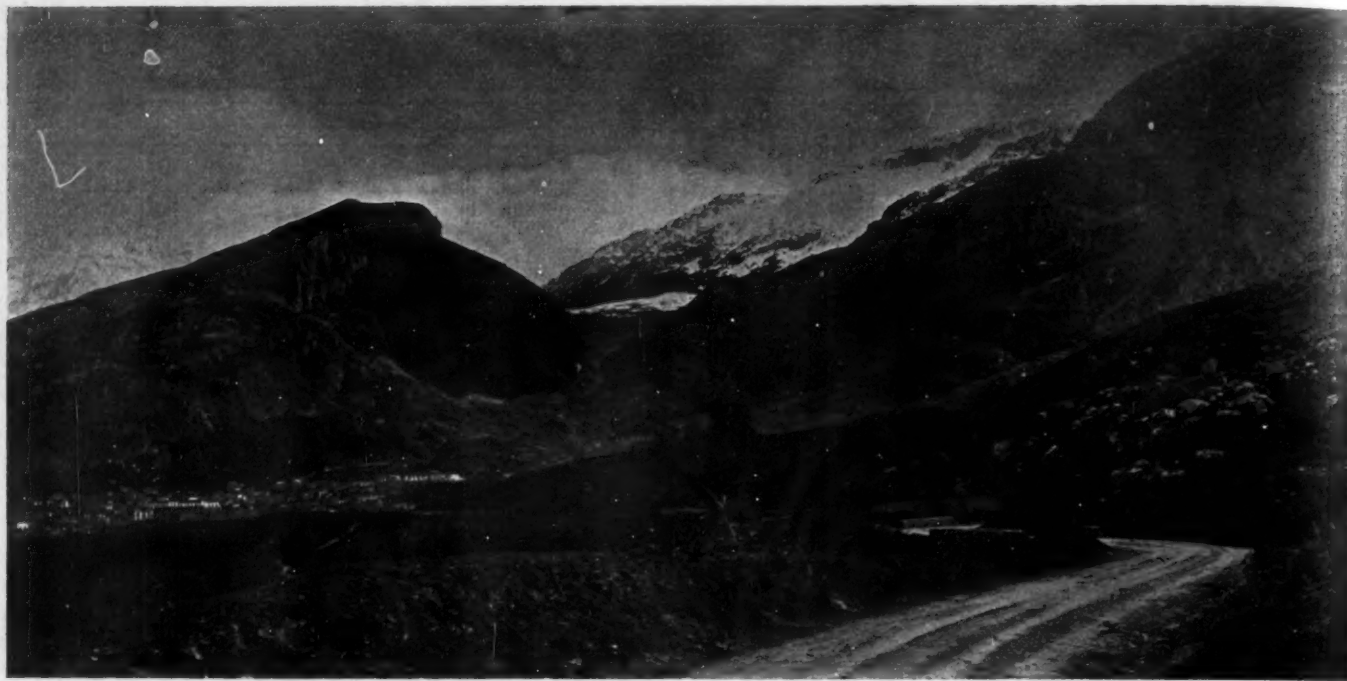
the tour the Chevalier has traveled over the chosen route and reported on it in this manner: "The road is grand from Cerda to Caltavuturo, but soon after passing the latter place, notably between Petralia to Castellbuono, where the road attains an elevation of 1,400 metres (4,550 feet) above sea level, the surface becomes bad. Fairly good from Castellbuono to Campofelice, it leaves

much to be desired between the latter place and Cerda—that is, the portion particularly which skirts the sea, and whereon the grandstands will be placed.

"Having regard to the difficulties of the route, it is probable that two and not three circuits will form the distance. This event is confined to touring vehicles of a chassis cost of less than £800, and of types of which



TYPICAL STRETCH OF SICILIAN ROAD WHICH WILL BE TRAVELED IN THE TARGO FLORIO CUP EVENT IN MAY.



NEAR ISUELLO THE SICILIAN SCENERY BECOMES SUBLIME WITH SNOW-CAPPED MOUNTAINS.

a series of not less than ten must have been constructed before the date of the closing of the entries."

Everybody in Sicily is actually at work for the material organization of the competition and the last mails inform us that the Sicilians are positively enthusiastic over the coming of the automobile caravan. It also must be known that the frame in which the famous course is placed is really splendid, and the most picturesque in the south of Europe.

The start will be near to Termini—six kilometers from the latter town and forty kilometers from Palermo. The road is bordered by enormous rocks on one side and precipices on the other. Soon after Palermo the automobilists will reach a magnificent straight line alongside the sea, parallel to the railroad track that goes to Cefalu. This part of the road is level for about ten kilometers, and absolutely straight up to the Aqua Camuni, where it turns slightly to the right, going towards Collesano. Then, it is again the abrupt mountain which goes up and down and makes zigzags at terrific height. Then the cars plunge down to Isnello and Castellbuono. After crossing Castellbuono the circuit continues by sinuous roads until Geraci is reached. From there they will climb a very strong hill that leads to Petralia Soprana, a culminate point of the circuit situated at 1,400 meters above the sea level.

Then the road descends nicely to Petralia Sottana, Castellana, Caltauturo. Near this town is the most difficult double turn of the circuit, being an up-and-down-hill one, at a very sharp angle. Finally by Cerda and many more sinuous roads the course comes back to the starting point.

The circuit will be driven on the right hand. In this competition the cars will certainly have to show all their qualities.

The country traversed by the course is marvelously sublime. Now the roads dominate profound vales, full of the roar of furious gulches; then, on the contrary, it is squeezed in narrow gorges bordered by high walls, on the top of which ruins of ancient castles are perched like eagle nests. Sometimes also a brigand's hut shows its straw roof between two high, black rocks visited by vultures.

The Executive Committee of the Targa Florio expects the greatest success, and the principal automobile firms of Italy, as well as the majority of the French, German, English and Belgium firms, have entered their best teams to dispute this competition.

An American Maker's Opinions

BUFFALO, N. Y., March 26.—George N. Pierce, the well-known automobile manufacturer, announced yesterday that within a few weeks his son, Percy P. Pierce, will start the American invasion of Europe by taking part in the principal touring contest of France, Italy, Germany and England.

Mr. Pierce, in regard to the manufacturing of automobiles, said:

"American manufacturers can compete with foreign manufacturers in making auto-

mobiles, and within the next two years the importation of foreign makes will cease entirely. The main trouble in manufacturing automobiles in this country has been that we could not get steel of the proper quality.

"When we ordered steel from an American manufacturer he asked how many hundred thousand tons we wanted, and we were forced to reply, 'We don't want hundreds of thousands of tons, but fifteen tons.' This steel, however, had to be of finer quality than was made in this country, and that is where we lost out with the foreign maker. But now some of the steel manufacturers are putting in good plants, and we will get even better steel than the foreign grade.

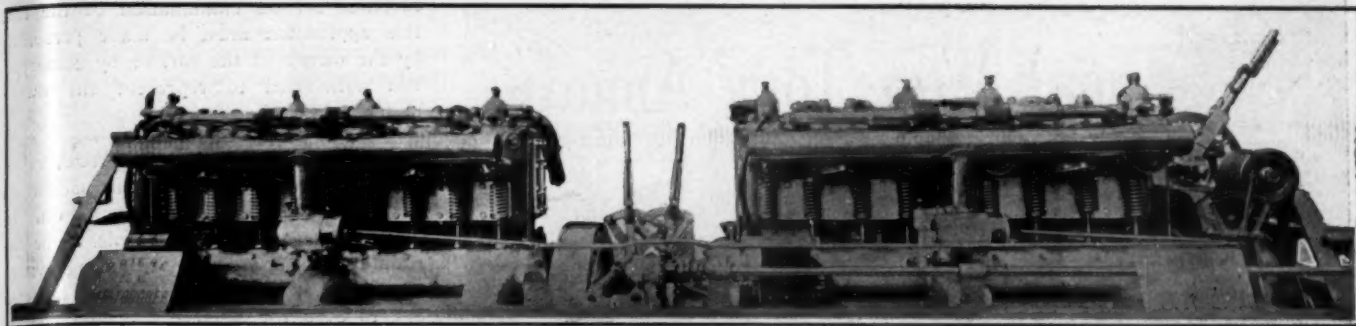
"The automobile has developed more during the past five years than any other manufactured article in the history of American enterprise. It will develop still further, as it is destined to be the main means of transportation.

"More than 95 per cent. of the commerce of the country is carried on wheels at present, and it will not be many years before the automobile surpasses all other rivals. The states are making better roads, and the day will come when the great trans-continental highways on which automobiles will be run will be the main means of communication between different cities.

France's Minister of Finance has offered two prizes, one of 20,000 francs and the other of 50,000 to the individual who shall discover, suggest or produce a denaturizing substance for alcohol, which will be superior to the agent at present employed, and which will entirely preserve the government from all possibility of fraud. The largest prize is to the individual who will discover means of employing alcohol for lighting purposes, in the same way, and with the same convenience, as paraffin is now used.



OUTLINE OF THE TARGO FLORIO COURSE.



SIDE VIEW OF THE "DUBONNET'S" 240-HORSEPOWER DE DIETRICH MOTOR EQUIPMENT.

The Motor Boat Innings Abroad.

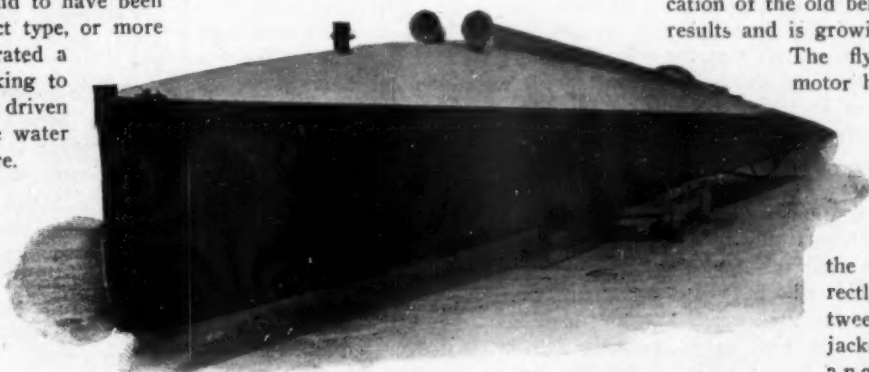
Nice, March 20.—Entries for the classic motor boat regatta to be held here the week of March 25-31 have closed and the craft entered represent all the great French and foreign boat builders. In the racer class the lines of nearly all the boats follow very generally upon those of the famous *Tréfle-à-Quatre*, which made such a good show in 1904, and which may be said to have been the forerunner of a distinct type, or more correctly to have demonstrated a principle to which all seeking to build hulls capable of being driven at great speed through the water have found it well to adhere.

Since last year constructors have earnestly sought means to strengthen and stiffen their hulls without diminishing speed, or sacrificing lightness. Many of the craft entered will, after Nice, take part in many river regattas, so that while the builders have spared no pains to strengthen their boats with a view to enabling them to keep the sea for a time, they will still have sufficient speed to afford them chances of victory in events on rivers and lakes.

De Dietrich 240-H.P. Auto Boat Motor.

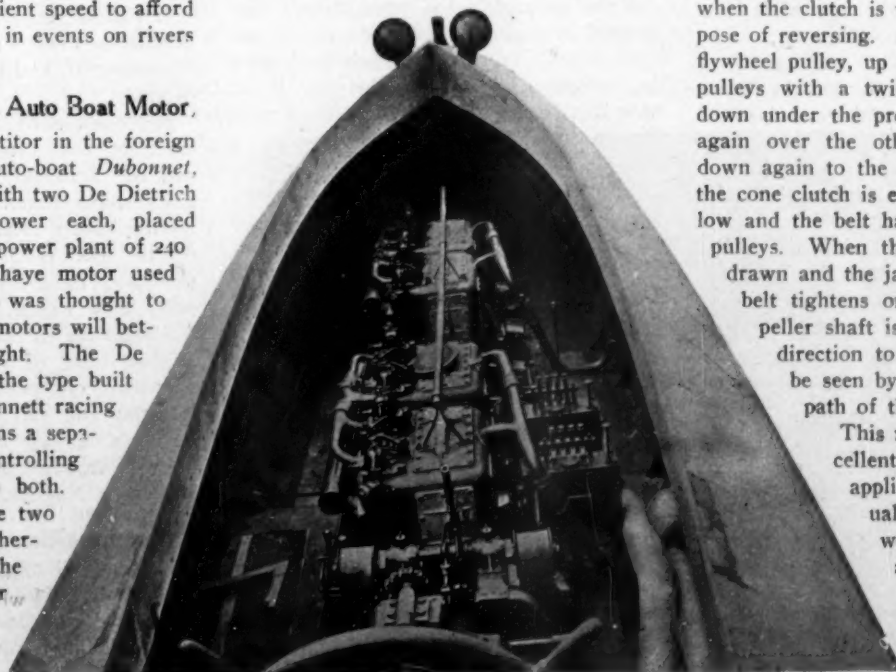
An interesting competitor in the foreign events will be the auto-boat *Dubonnet*, which has been fitted with two De Dietrich motors of 120 horsepower each, placed tandem, and forming a power plant of 240 horsepower. The Delahaye motor used in the boat last season was thought to be too heavy; the new motors will better distribute the weight. The De Dietrich motors are of the type built for the 1905 Gordon Bennett racing cars. Each engine forms a separate unit, but the controlling levers are common to both. Connection between the two motors consists of a leather-faced cone clutch of the usual type. Each motor can be started individually if desired or one may be started by hand and the

connecting clutch let in to start the other, though this must be done with care. The starting crank of the forward motor is seen in the extreme left of the engraving, showing a side view of the motor; a single chain is used to rotate the crankshaft, and room must be left forward of the motor for a man. The after engine is



THREE-QUARTER VIEW OF HULL FROM THE PORT SIDE FORWARD.

started from the rear end by a crank not shown in the same engraving, the longitudinal shaft and chain being shown, how-



BIRD'S EYE VIEW OF THE "DUBONNET" LOOKING FORWARD, SHOWING MOTORS IN POSITION.

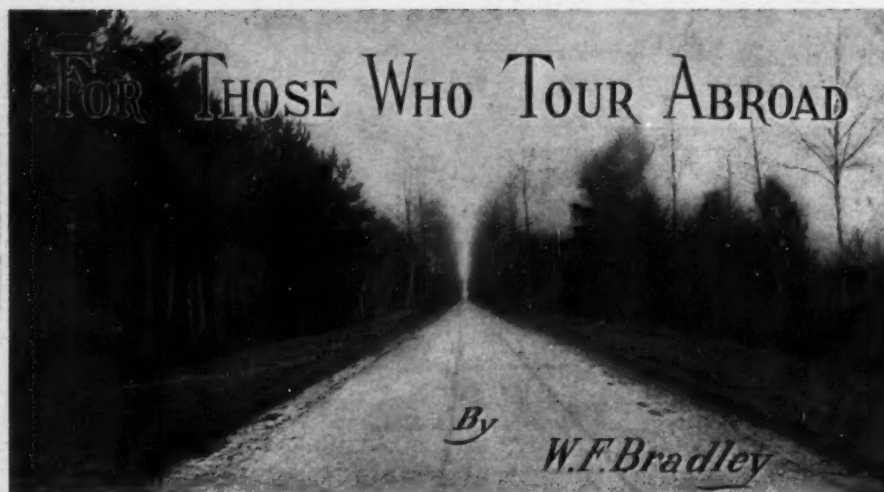
ever. The valves are all on the side and the piping is well arranged. Cylinders are cast in pairs with integral heads and valve chambers. The water jackets consist of skeletons cast integral with the cylinders and covered with flat-ribbed plates of aluminum. The camshaft slides longitudinally to give half compression when starting.

Probably the most interesting part of the power plant is the reversing gear, which, though it consists only of a modern application of the old belt drive, gives excellent results and is growing in favor in France.

The flywheel of the after motor has flanges, so that the rim of the wheel forms a pulley for a leather belt about 6 inches wide. A similar pulley is secured to the forward end of the propeller shaft. Directly over the space between the two pulleys is a jackshaft, placed at right angles to the propeller crank and crankshaft, on which are two loose jockey

pulleys. The jackshaft with its jockey pulleys is automatically lowered when the direct drive clutch is engaged and is raised when the clutch is withdrawn for the purpose of reversing. A belt passes under the flywheel pulley, up over one of the jockey pulleys with a twist of 90 degrees, then down under the propeller shaft pulley, up again over the other jockey pulley and down again to the flywheel pulley. When the cone clutch is engaged the jackshaft is low and the belt hangs clear of the large pulleys. When the cone clutch is withdrawn and the jackshaft raised until the belt tightens on the pulleys, the propeller shaft is driven in the opposite direction to the crankshaft, as will be seen by mentally following the path of the belt.

This reversing gear is an excellent one, as it naturally applies the power very gradually, is not subject to wear when not in use and is free from complications and from constantly moving parts which might cause trouble if neglected.



A TYPICAL FRENCH ROAD, LIKE WHICH THERE ARE MANY MILES.

PARIS, March 15.—The annual reports of several British railroads have revealed the fact that quietly, almost without the public being aware of it, a distinct change is taking place in passenger traffic. Without exception, on all the main lines in England, a serious falling off is recorded in the number of first-class travelers. It is not that the public travels less, or that the third-class compartment is preferred to the first, but that the rich classes prefer the automobile to the railroad.

In France, where there is proportionally a larger wealthy floating population, both native and foreign, than in the British Isles, the change is more noticeable, and the number of wealthy families who have neglected the iron way for the high road is largely on the increase. A visit to important garages in Paris during spring, seaside resorts during summer, and the Riviera centers of gayety during winter, affords ample illustration of the tendency of modern locomotion.

Among those who have done much to deprive the railway companies of receipts from first-class passenger traffic are American visitors to Europe. The contingents of tourists who every summer cross the Atlantic in ever-increasing numbers and spend two or three months "doing" Europe, realize that the only way to see a country thoroughly, intelligently, and enjoyably is by automobile. Up to recently this sport has been confined to multimillionaires, but with the development of enthusiasm for motoring among all classes in the United States, men of more modest means are beginning to consider a trip through Europe in an automobile.

Better to Use One's Own Car.

A crowd of questions present themselves to the automobilist who has taken the decision to travel through France and adjoining European countries. Shall he ship his own car across the Atlantic? Shall he buy a new one in France? Or, shall he hire one? The last-mentioned plan would be the most simple, but the one least likely

to be adopted by the true automobilist, for a hired car would entail a professional chauffeur and would rob the trip of the pleasure which is only to be obtained from driving and caring for a well-constructed machine.

A good second-hand car could be bought in Paris and sold to the broker after the trip; or, if the automobilist is desirous of purchasing a French machine, he could take delivery of his car in Paris, and, his European tour finished, take the vehicle back with him to America.

Supposing that the automobilist desirous of making a trip of from one to four months in France already possesses a reliable touring machine capable of carrying a party of four at a moderate speed, he cannot do better than bring it over for his tour. He will be put to some trouble at the commencement, but will be amply repaid in the pleasure to be derived from handling his own trusted car.

The First Customs Necessity.

If the automobile has been entirely constructed in America, there will be no customs formalities to go through on leaving the country. Supposing the car is of American make, but fitted with French tires, lamps, horns, or other accessories, a declaration must be made to the custom authorities in order that these articles may re-enter the country free of duty.

If the car is of foreign construction, additional care must be taken to have it declared in proper form in order to escape duty when returning. The broker who originally imported the car should be looked up and asked to make the necessary researches for an examination of the car by the custom house. He will have to furnish the name of steamer by which the automobile arrived, the date of arrival, the custom house invoice number, the date of entry, and the date duty was paid. The usual broker's fee for these duties is from \$5 to \$10. All information having been obtained, an application must be made to the customs au-

thorities for an examination of the car; this application must be made personally by the owner of the car, or by some person authorized to represent the owner under a deed of attorney.

To Ship Your Car Abroad.

So much depends on careful packing of the automobile, this work should only be entrusted to experienced people. The car should be suspended in a strong waterproof case, the cost of which will be from \$75 to \$100 for a large car, and slightly more costly for an extra large vehicle.

The automobilist would save himself considerable trouble by placing the matter in the hands of some transport agent making a specialty of shipping automobiles.

From the American Express Company, 65 Broadway, New York, a firm with considerable experience in this branch of shipping, the following quotation has been obtained:

From New York to Paris the cost of shipping an automobile varies from \$90 to \$250, according to the steamer and weight and size of car.

Packing in New York varies from \$60 to \$100. In Paris the charge is from \$25 to \$55.

The Compagnie Générale Transatlantique, running between New York and Havre, often refuse to carry automobiles on their crack liners, shipping them only on cargo boats, of which there is a regular service about three times a month. Inquiries as to the transport of the car should therefore be made a little time in advance, so as to avoid landing in Europe and having to wait an unnecessary length of time for the car to arrive.

When You Enter France.

On entering France, customs duties must be paid on the automobile, but this amount will be refunded on leaving the country within twelve months.

It should be particularly noted that this permission always dates from January 1 to December 31, and not from the actual date of entry.

Representations are at present being made by the Automobile Club of France and the Touring Club of France towards the customs authorities with a view to obtaining twelve clear months. The amount of the tax is \$12 per 100 kilos (220 pounds); thus, for a car weighing 1,000 kilos, \$120 would have to be deposited.

Should the traveler leave the country for a short time, he should allow the money to remain on deposit with the custom authorities, and only ask for its return when definitely leaving France. Before passing over the frontier, however, his customs receipt should be indorsed.

Entering Other European Countries.

On passing into adjoining European countries—Italy, Switzerland, Belgium, Germany—the same formalities will have to be gone through as on entering France. In

Belgium, the tariff is 12 per cent. of the declared value of the car; in Switzerland, \$4 per 220 pounds; in Italy, \$40 up to 1,100 pounds, \$80 from 1,100 to 2,200 pounds, and above this weight, \$120.

In all cases the car must enter these countries by road, accompanied by the owner; if sent over the frontier by rail, full duty would have to be paid and would not be returned.

On entering Italy a certificate must be produced declaring the exact weight of the car.

Registering and Obtaining Certificate.

The French regulations require that every automobile should be registered at the offices of the "Prefect of a département," or, in Paris, with the Prefect of Police (Préfecture de Police, Paris).

The declaration must be made on paper bearing a 60 centime stamp (12 cents) and be accompanied by the full name and address of the owner, the name of the constructor, and the number of the motor. A receipt (a gray card) bearing the registered number of the car will be given, and this number must be carried in white letters on a black ground, both in front and at the rear of the car.

To obtain a driving certificate a demand must also be made to the Prefect of the Department, or the Prefect of Police in Paris, on stamped paper (*papier timbré*) of 60 centimes value, to be obtained at any post-office. The name and address of the applicant are required, his address in France, three unmounted photographs, and some papers to prove his identity (a birth certificate, or a certificate from the American consul is generally asked for).

The applicant will probably be called upon to undergo a driving examination before the inspector of the Service des Mines, and, having satisfied that official of his ability to drive an automobile, will be granted a red card available throughout France. If a short visit is made to an adjoining country, the French certificate and registration number may be used, but should a lengthy stay be contemplated, the tourist should immediately conform to the regulations of the country.

In all these matters the American visitor must be prepared for a large amount of red tape. It is advisable, therefore, to come furnished with all necessary papers in order to avoid vexatious delays. Once, however the customs house passed, the car registered, and the driving certificate obtained, there will be nothing to mar a trip through France, and the visitor will certainly return home with pleasant recollections of good roads, reasonable police regulations, fine scenery, and novel, historic, and interesting surroundings which will remain in memory for many a day.

In returning to America it is advisable to hand all papers connected with the passage of the automobile through the customs house to the broker who attended to the matter in the first instance. The cost will

be but trifling, and much trouble will be saved the traveler.

Should alterations have been made to the automobile during its absence, duty will have to be paid on the value of the work done. A broken part replaced or any minor repair which is not at all noticeable would pass through free of duty; but should a new body have been fitted, a new ignition system adopted, or any improvements of an important nature have been made, duty would have to be paid according to their value. Travelers have on several occasions contested the right of the customs authorities to enact duty on repairs, but when the matter has come before the courts have always lost their case.

How to Hire a Car in Paris.

There are in Paris several firms hiring out automobiles for long or short distances, and the visitor who prefers to take a hired machine rather than bring over his own vehicle or buy a new one, will always find first-class cars of the latest model capable of going anywhere.

These cars are, as a rule, not let out except under the charge of the firm's own chauffeurs, even if the hirer is a skilled driver. Of course, arrangements can often be made with the chauffeur for him to give up the steering wheel to the traveler, but such an arrangement is not recognized by the owner of the car, and the professional chauffeur would be held responsible for all accidents or mishaps which might happen to the automobile.

A few firms are to be found who are not so strict in this matter, and would allow an automobile to start on a tour without a chauffeur if they were fully covered against accidents to the car. Often these conditions are so onerous as to amount practically to buying the car, which, by the way, can always be done, the dealer agreeing to buy back the car at the end of the tour at a price to be agreed upon according to its condition.

At the Bob Walter garage, 83 Avenue de

la Grande Armée, THE AUTOMOBILE correspondent was shown a number of handsome cars of different makers used exclusively for long and short tours through France, their occupants generally being American visitors. At the beginning of the year they are principally employed on runs to the Riviera; in the spring they are often found in Touraine, and, as the Summer advances, they leave the capital on journeys extending from one to four months. The price varies considerably, according to the size of the car and the journey undertaken, but may be quoted at \$20 a day for a medium-sized car.

A handsome, roomy touring car, Panhard, Renault, Mercedes, or other well-known make, with side entrance and cape hood, could be obtained for a long journey at the rate of \$1,000 a month, including all charges except gasoline, garage charges, and board and lodging of the chauffeur.

The Société Ader, 40 bis Avenue de Suffren, Paris, gives the following tariff for the hire of automobiles:

	2-cyl.	4-cyl.
Half day of 6 hours.....	\$15	\$17
Day of 10 hours.....	25	30
Seven days.....	170	180
Two weeks.....	270	300
Four weeks.....	360	400

For service in Paris these charges are inclusive. If on a tour, the hirer must pay for gasoline, garage, and board and lodging of chauffeur. The standard type of car used by the Ader company for town service has a four-cylinder motor, with drive through countershaft and side chains, and carries a landaulet body. For long-distance touring, double-phaeton, side-entrance bodies, with folding hood or tonneau bodies are also supplied.

The chauffeur is in uniform, and the cars, which are built by the Ader company, have a smart and well-finished appearance.

The Price of Gasoline.

The price of gasoline throughout France varies from 60 to 70 centimes (12 to 14



IN THE PYRENEES DISTRICT, WHERE THE SCENERY BECOMES RUGGED AND PICTURESQUE.



A FRENCH ROAD BEING USED FOR STRAIGHTAWAY COMPETITION.

cents) in Paris, to 30 or 32 centimes (6 cents) in the country. Except in Paris, one need never pay more than 8 cents.

In some cases a contract is made with the chauffeur to supply all fuel required for the tour and provide his own food and lodging. The traveler must, of course, know the entire distance he intends to cover and how many miles he will travel a day. This frees the hirer from all trouble of paying for fuel on every occasion and gives the chauffeur more liberty, for instead of taking his meals at the same hotel as the travelers he will patronize much cheaper establishments and thus save a little money for himself without robbing anyone.

Insurance charges are always covered by the owner of the car, for France only, the hirer paying insurance while in other European countries. The Ader company insures against accidents for \$6,000 and \$2,000 for each person injured, the responsibility of the company being limited to this sum.

Join the Touring Club de France.

Persons who intend spending any length of time in Europe would be well advised to enroll themselves as members of the Touring Club de France, the headquarters of which are at 65 Avenue de la Grande Armée, Paris. Entrance is obtained on payment of an annual fee of \$1, and on the proposition of two members of the Touring Club.

The American Automobile Association not long since consummated an arrangement whereby a member of any one of its clubs or an individual member could upon presentation of his A. A. A. card at 65 Avenue de la Grand Armée obtain immediate membership in the Touring Club; or a mailed application, also accompanied by the A. A. A. card, would receive prompt attention and be sent to any address supplied. A. A. A. membership thus makes unnecessary the indorsement of two Touring Club members and also removes the customary fortnight of delay in awaiting T. C. F. action on the application.

In addition to guide maps, advice on routes, lists of recommended hotels, with a reduction of 10 per cent., the Touring Club is authorized to grant free permits into foreign countries. Instead of paying the cus-

tom duties in the usual way, members may deposit the amount with the Touring Club de France, and will receive a certificate allowing them to enter and leave a foreign country any number of times during the year. The particulars required when applying for a foreign permit, known as a tryptique, are name, address, and membership number, make and description of car, name of maker, number of the motor, kind of tires, value, and weight of automobile.

When One Crosses to England.

As many automobilists finish up a trip in France with a run through the British Isles, some figures as to the cost of crossing the Channel may be useful. There are three main routes from France to England:

Boulogne to Folkestone, the shorter sea passage, but the most expensive route, the rate for an automobile, unpacked, being \$25, owner's risk, and \$37.62, company's risk.

From Dieppe to Newhaven, a four-hour sea journey, the rate is \$22.50 at owner's risk, and \$30.25 at company's risk, plus \$1 per ton.

From Granville, St. Malo, Cherbourg, Honfleur, or Havre to Southampton, sea journey eight to ten hours, the rate is not exceeding one ton, \$11.86; not exceeding one and a half tons, \$17.69, and not exceeding two tons, \$23.72.

Automobiles must be at Havre at 4.30 P. M., and for all these services it is

necessary to reserve space on the steamer the previous day and at the same time advise the company of the weight of the automobile, extreme length, width, and mention if the car is fitted with a canopy or limousine body. Gasoline tank must be emptied before going on board. Between Havre and Southampton there is a daily service, but between other French ports and Southampton boats only run two or three times a week.

A. A. A. members, on reaching London, and calling at the headquarters of the Automobile Club of Great Britain and Ireland, 119 Piccadilly, W., upon presentation of membership tickets to secretary J. W. Orde, will receive international courtesies, there being an understanding between the A. A. A. and the A. C. G. B. I.

New French Regulations.

PARIS, March 9.—New French automobile regulations have been under official consideration for several months and may be expected to be issued in a short time. They will contain several important modifications of the 1899 and 1901 laws. Instead of the inspector having to assure himself solely of the candidate's ability to drive, under the new régime he will demand a medical certificate, proving that the future chauffeur has no disease likely to hinder him as a driver.

Two certificates will be granted, one for cars running at less than thirty-five kilometers an hour and another for vehicles capable of traveling at a higher speed. (Curious anomaly, the French speed limit is thirty kilometers an hour in the open country.)

In order to prevent the issue of a low-grade certificate for a high-power machine, each chassis must carry a plaque easily visible, on which shall be given the name and address of the builder, power, series and number of the motor. Except for electric cars, two numbers must be carried, one in front and one in the rear, which shall designate not the car, as at present, but the actual proprietor.



ENTERING VIBRAYE, A FRENCH VILLAGE ON THE SARTHE CIRCUIT.

GAS TURBINES DISCUSSED BY DUGALD CLERK.

AMONG the problems which engage the attention of the inventor in the automobile field, one of the most attractive, if we may judge from many communications received on the subject, is that of the substitution of the gas turbine for the reciprocating engine as the prime mover. In the past the subject has been discussed occasionally in these pages, and we now publish one of the most valuable contributions on the subject originally from the pen of the great English engineer, Dugald Clerk, and which was presented to the notice of the engineering profession in an address delivered before the English Junior Institution of Engineers.

The great success that has been attained in the introduction of the steam turbine for stationary power purposes and in steamships has undoubtedly been largely responsible for the interest of inventors in the problem of the gas turbine. In the direction of simplification and especially of avoidance of the stresses and vibrations caused by the reciprocating masses in the ordinary form of motor, the problem seems worth while, but there are apparently certain insurmountable difficulties in the way especially for automobile propulsion in which the question of weight is of prime importance. In his opening remarks Mr. Clerk states that he has only known one instance in which a gas turbine "really rotated," and in this instance the brake horsepower was infinitesimal. The experiment was conducted by F. W. Lanchester, the automobile engineer, who in originality and freedom from the prejudice of convention is the English equivalent of our own Charles Duryea. The machine made a great noise, not an infrequent accompaniment of an inventor's pet scheme, and did practically nothing else.

Mr. Clerk has reached the conclusion that the practical difficulties in the way of the development of the gas turbine are insurmountable—especially those occasioned by the high temperatures employed. In his address he refers to the writings of R. M. Neilson and Dr. Charles E. Lucke (Columbia University) and Prof. Sidney A. Reeve on the subject and continues:

"In most of the recent discussions upon gas turbine problems it has been recognized that the temperatures possible in the cylinder gas engine are impossible for the gas turbine. It has been fully proved by many investigators, including myself, that the temperatures quite common in ordinary gas engine practice range as high as 2,000 degrees Centigrade, although in the best practice, for most economical results 1,500 degrees Centigrade or 1,600 degrees Centigrade appears to be an upper limit. With

the temperature of 1,500 degrees Centigrade or 1,600 degrees Centigrade, a first-class modern gas engine of about 50 horsepower will give an indicated efficiency of 35 per cent. At the same time, the negative work of the cycle is so low that the mechanical efficiency of the engine may be as high as 86 per cent., or even over. If one realizes what the temperature 2,000 degrees Centigrade means, it becomes very evident that no turbine constructed either on the lines of Parsons or Laval could possibly be made to work with continuous supply of such gases; 2,000 degrees Centigrade is considerably over the melting point of platinum. It is much higher than the temperature at which cast-iron flows from the crucible, or, indeed, the temperature of the interior of the blast furnace itself. Any blades of iron, steel, or, in fact, of any other material—even brick-fire itself—becomes fluid or semi-fluid at this temperature. It is obviously hopeless, therefore, to attempt, in the gas turbine, temperatures which are quite feasible in the cylinder engine. This fact, as I have said, is generally recognized.

It is accordingly said, by those who take a favorable view of the gas turbine, that it is necessary to supply the turbine with gases at a much lower temperature. Mr. Neilson fixes the temperature of 700 degrees Centigrade as one which steel turbine blades would probably stand, without too rapid deterioration. I fear that on this point I must differ from him, because in my experience, oxidation of steel, and even iron, is a fairly rapid process at this temperature. Nothing new has been proposed as to the thermodynamic cycle of the gas turbine, so that all reasoning upon efficiencies depends upon the deductions already made from internal combustion engine practice.

"Seeing the impossibility of constructing a turbine with materials to stand a high temperature, many have proposed to convert high temperature into kinetic energy, so that instead of having work stored up in the gas in the form of heat, the heat shall disappear, and the energy of the heat be transformed into motion of the gaseous particles at a high velocity. Such proposals, then, include the compressing of a gaseous mixture to, say, 50 pounds or 60 pounds above atmosphere, the igniting of that mixture within a combustion chamber at constant pressure, and the expansion of the mixture through an expanding jet of the Laval type, so as to drop the temperature and obtain its equivalent in kinetic energy or velocity of the gaseous particles. The rapidly moving particles at the relatively low pressure and temperature are then allowed to impinge upon rapidly rotating blades of sickle configuration, and they are supposed to give up

their energy of motion to those blades, and so expend work upon the turbine. This appears to be the most feasible of all the gas turbine proposals, so I will proceed to examine it a little more minutely.

"Success by this cycle of operations requires:

"(1) A rotary or turbine compressor of high relative efficiency.

"(2) An expanding nozzle which shall ensure that free expansion is quantitatively equivalent to adiabatic expansion behind a piston.

"(3) A rotating turbine of such construction as to secure very high efficiency of transformation of kinetic energy of the moving gas into effective work available at the turbine shaft.

"Assuming air to be the working fluid, and specific heat to be constant through the temperature range, it is easy to calculate the efficiency of the Joule or Brayton cycle, which these operations in effect represent. It would be useless to attempt to work a turbine at a pressure so low as to be relatively inefficient compared with the gas engine, so I have chosen a Joule cycle of, say 48 per cent. ideal efficiency, which in a cylinder gas engine would probably give, in practice, about 30 per cent. indicated efficiency. For this ideal efficiency the pressure of compression would require to be 141 pounds per square inch absolute. To give power with a reasonably small pump, I shall assume a maximum temperature of 1,700 degrees Centigrade. That is, assuming a perfect compressor and a perfect nozzle expander, the temperature would only fall from 1,700 degrees Centigrade to 750 degrees Centigrade. Plainly, this temperature would be too high for a Laval disk with blades. In order to get a reasonable temperature on expansion, it would be necessary to assume a maximum temperature in the combustion chamber no higher than 1,000 degrees, and this would bring down the temperature, after complete expansion, to about 500 degrees, which, no doubt, steel turbine blades can be expected to stand for some considerable time.

"With these assumptions, however, the gas turbine would not be very economical, as compared with cylinder engines, even assuming all difficulties overcome. The theoretical and practical difficulties, however, are very serious indeed.

"To begin with the question of an efficient air compressor. I am not aware of any turbine compressor capable of compressing up to 140 pounds absolute from atmosphere with anything like 60 per cent. efficiency. Before success could be attained, this efficiency of compression, so far as diagram is concerned, should be at least 90 per cent., in order to

allow for unavoidable mechanical and other losses in the subsequent processes. It has, it is true, been proposed to substitute cylinder compressors operated from the turbine, instead of turbine compressors; but this, it appears to me, would be equivalent to abandoning at once all the advantages of the turbine principle. If reciprocating cylinders are to be used for compression there is no objection to using them also for expanding. No gas turbine with cylinder compressors could, in my view, succeed. Assuming, however, even 90 per cent. efficiency from a turbine compressor, and assuming that we have a compressed gaseous mixture burning freely in the combustion chamber at the desired pressure and temperature we have yet to face the problem of the expanding nozzle. It is always assumed that with the use of an expanding nozzle temperature drop can be as certainly attained as with an expanding piston in a cylinder. This, it seems to me, has been by no means proved.

"You will all recollect Dr. Joule's famous experiment with two vessels immersed in water and connected together by a pipe having a stop-cock upon it. All was compressed into one of those vessels, the water round the vessel stirred, and equilibrium obtained, while the other vessel was rendered as vacuum as possible. The stop-cock between the two vessels was opened, and it was then found that when the water was stirred again, no disturbance of the equilibrium ensued. This, of course, meant that although heat was lost in the one vessel, giving velocity to the gases, it was gained in the other vessel by the impact of the gases against the walls.

"Joule modified this experiment by placing the two air vessels in separate water containers. He then found that the temperature of the one vessel dropped, due to expansion, but the temperature of the other vessel rose as much as the first dropped.

"Now apply this experiment to reasoning on the behavior of the flame in an expanding nozzle. Assume the two vessels to be connected together by a Laval nozzle, and assume that while in the nozzle the gases experienced the full temperature fall due to adiabatic expansion. Immediately, however, on contact with the walls of the second vessel the velocity of the particles would be stopped and the temperature would be restored to a point somewhat above the original temperature; that is, the mass of expanding flame in the pressure vessel would gain heat by the amount the first vessel lost. That is the result of the final process. It will be easily recognized that to obtain a sufficient temperature drop in an expanding nozzle necessitates the practical absence of turbulent motion of every kind; that is, to expand adiabatically the jet must be so constructed that there is an absolutely smooth flow from high pressure to low, and no impact or loss of velocity from any cause whatever. So far as I understand expanding

jets, no adiabatic expansion so perfect as this has ever been obtained.

Assume, however, that the efficiency of expansion in such a jet is, say, 90 per cent. We now come to the question of the efficiency of conversion by the turbine blades. In many calculations from diagrams, it is assumed that the efficiency of conversion of motion into work is practically perfect. This, however, is by no means the case in present turbines. Even the steam turbine, high as its efficiency is, compared with the reciprocating engine, has no very high efficiency of conversion in any of the forms of turbine at present on the market. That is, if we assume a mass of gas to exist in a compressed state in a reservoir, and we choose to expand this mass of gas in two ways, for the sake of comparison—(1) behind a piston; and (2) by means of a Laval jet and turbine, we shall find that the efficiency of conversion of the turbine, once high velocity is attained, does not exceed 80 per cent. In this respect the efficiency of conversion of rotating turbine blades is inferior to that of a moving piston in a cylinder. The reason of this is obvious. It is impossible to so arrange the impact of a rapidly moving gas with a turbine blade or blades in such manner as to entirely avoid turbulent motion. The impact, for example, of swiftly moving gases on a fixed surface results ultimately entirely in turbulent motion, which restores to the gas or to the blade struck all the heat which has disappeared in temperature fall due to adiabatic expansion.

(To be continued.)

An Imitation 'Bus Trip.

The sight-seeing 'bus has found generous use in many cities throughout the country, and thousands have enjoyed observation rides in a manner not otherwise possible. Now comes a reproduction of the big juggernauts, constructed in such a manner in connection with a moving picture entertainment that one is easily led to imagine he is actually enjoying the real ride itself. Tim Hurst, the well-known baseball umpire and a referee of glove contests and wrestling matches, is the discerning man who figured out that since the "rubber-neck" coaches were so popular people would patronize a substitute that could be had at a lesser price. Living at the Hotel Bartholdi in New York City, one of the starting spots of the sight-seeing caravan, Mr. Hurst got the idea from a daily observation of the departure of these big pleasure wagons.

After one has gotten seated in the "prop" 'bus, the lights are properly arranged, and the journey begins to the accompaniment of horn tooting, the starting of the motor, and the oscillating motion exactly as one would experience it from the top of a real vehicle. The imitation car is suspended in such a manner as to make the effect very realistic. Apparently the vehicle is forcing its way through the labyrinth of traffic,

with occasional stops at crossings, pedestrians dodge to the right and left, and the lecturer recites the objects of interest along the route. New York City requires a film of 840 feet, and the route starts at the Flatiron building, covers Fifth avenue, crosses to Riverside Drive, returns down Broadway, invades the East Side, and crosses the Brooklyn Bridge. Another film, 800 feet long, pictures Washington in like manner. Mr. Hurst is placing his "auto tours" in a score of cities throughout the country, and Dreamland, Coney Island, will also possess one.

The letters patent which have been granted the "Timothy C. Hurst Amusement Device" relate to and cover a new amusement device, the body of which may be made to represent an automobile touring car, or any vehicle adapted to carry passengers, and is suspended above the floor in order that suitable vibratory mechanism may be incorporated therewith for the purpose of impart-



AS THE CAR LOOKS FROM THE FRONT.

ing a vibration similar to that produced in a running vehicle when in motion. An oscillating device is also installed for the purpose of producing the effect of traversing pictured curves either to the right or left, or passing over uneven surfaces.

The accepted style of tourist car with elevated seats rising one above the other toward the rear of the car is used and swinging steps at the rear admit the passengers. At the front of the car the mechanism is located which controls the motion, and which is under the care of an operator. After the car has been filled with passengers the operator closes the circuit by a turn of the switch handle, starts the motor, which is connected to a balance wheel by means of a belt, and keeps the same under his control at all times.

The device is intended for use in connection with moving pictures, the scenes being placed in front. The realistic effect is produced by the vibratory movement of the car, controlled by its mechanism working in union with the moving pictures or scenes.

Trend of French Practice in Construction.

Conclusions Drawn from Tendencies Observed at the Paris Salon—Finality of Design Still in the Future.

By RENE M. PETARD.

PARIS, March 7.—Under different headings a general survey has been made, in preceding letters, of the most important features of the best known makes of machines exhibited at the Paris show, and also of the main constructional points in a number of other makes, thus giving the reader an abstract of the various ways in which designers conceived the different parts of their machines. Drawing conclusions from these articles and from what the space reserved for them unfortunately barred out may be a difficult proposition, as it hardly can be done without being, perhaps, a little prejudiced in some direction by one's own ideas and experience. As it might, however, prove useful if not interesting, the feat will be attempted, with the greatest possible care to be strictly impartial.

A few points which have come under discussion periodically ever since the automobile evolved itself to approximatively its present types, without ever receiving a satisfactory solution, with the result that, even now, no expression of a tendency can be given, will be left out of this study. Prominent among these is the propeller shaft vs. chain drive discussion.

It is evident that in a mechanical product susceptible of such widely varying applications as the modern automobile, there cannot be any hard and fast rule to be universally applied to all the forms the machine may take. Consequently in dealing with such a subject as this care should be taken by the reader not to be misled by generalizing too much from anything that may be said concerning one particular type of machine, as the most erroneous conceptions might result.

TWO CLASSES OF PLEASURE CARS.

In the pleasure car line we find in Europe (as well as elsewhere) two classes of machines, the dividing line between which is becoming more and more distinct as the time goes on; namely, the class formed by those machines which are built solely and exclusively with a view to luxury and style, irrespective of cost, so that they may reasonably be expected to contain the finest engineering developments suggested by the experience of the past; and the other class, which is formed by machines developing simultaneously with the former but on simpler lines, as they are intended for more practical purposes and for a class of buyers for which the cost of upkeep and the original expenditure in the purchase of the vehicle are important considerations.

In the former class we find the school where designers learn the perfectable and

the good points of their conceptions, and test them in their first, and consequently more complicated form, until they have brought them down to greater simplicity and equal, if not greater efficiency, when they can be used to further increase the quality of the cars of the second class. Thus, for the particular end aimed at in this article, the highest class of cars will be most extensively treated, although in the ordinary course of things, the other class, which represents a great majority, should have been given pre-eminence.

In the class which we termed "the first" are to be found racing cars, which properly are the school of automobile design, and the high-powered touring cars which are generally directly evolved from the racing machines. Not considering the freaks, which too often supply arguments to the adversaries of racing, and those catalogue high-speed touring cars belonging to this class only by the size of their cylinders, which too often are too big for the designer's abilities, we find that for 1906 great progress has been made along lines which could well be foreseen a year back, and yet which open new prospects for further development toward the ideal type of machine the general conception of which is every day becoming easier to realize.

DEVELOPMENT OF HIGH-SPEED ENGINES.

The engine, naturally, is the most perfectable part of these machines, since it is, with the clutch, that which varies the most in its conception. The undoubted tendency in this respect is toward bringing the engine as near as possible to a rotary motor by lessening, to the greatest possible extent, the defects essentially belonging to the reciprocating motion. Evidently the practical rotary explosion motor or the turbine are things probably of the far future, but nevertheless, the tendency is to so make our reciprocating motors now that they will hardly be known to possess reciprocating parts.

This end is likely to be attained by increasing the number of reciprocating units and decreasing their weight so that their respective motions overlap each other in such a way that any given motion will be continuously produced by its succession in the different elements of the motor. This has been obtained in the four-cylinder motor, which undoubtedly has now come to stay, as it is the most practical form of engine, taking cost price into consideration. In this engine, however, although any given motion of the piston or parts is being constantly produced, this motion constantly varies in intensity, being maxi-

mum and nil at each stroke for extremely short periods of time.

In order to reduce the duration of these periods it was necessary to increase the speed of the motor, thus obtaining a greater number of reciprocations in a given time, so that they became more confused and consequently less felt, having less time to impart their motion to other parts. This has resulted in the construction of motors of the highest power in automobiles which normally revolve at speeds considered fatal a few years ago, even for the fastest of the medium-powered engines.

MULTIPLICATION OF CYLINDERS.

Other designers preferred to multiply the number of irregular periods not by increasing the speed, but by increasing the number of cylinders; this has resulted in the materializing of long-thought-of six-cylinder motors, or even of such excellent machines as the eight-cylinder English Rolls-Royce engine, and the Darracq racer used in Florida and Cuba. That these will become the standard types of engines is to be doubted, however, as their complication becomes almost commercially prohibitive; but it should be considered that the six-cylinder engine may have a chance for the machines classed among the high priced ones. Besides increasing the regularity of the torque, the multiplication of the number of cylinders, or of the impulses per cylinder, has perhaps the more important advantage of the increase in flexibility of the motor.

CLASH GEARS TO DISAPPEAR.

It is now generally considered by all our best designers that in the car of the future there will not be anything like the change-speed gears which we use, or have used in different forms in the past, as all these have always been most unmechanical devices which must of need disappear eventually. To permit this, a flexible engine, and one that will preserve its power at different speeds, just as does a steam engine, will naturally be required, and that is what every one is striving to produce. The means mentioned above have been steps in that direction, which, added to the improvements in valve and cam design, have permitted us now to obtain engines giving a power strictly in proportion to speed between very wide limits.

This is, however, not sufficient to do away with all gearing, as several experimental machines have shown of late. To obtain the required engine, that is, one giving a constant power at different speeds and possibly developing occasionally, a power above normal, various experiments have been tried, among them the Mercedes compound engine, all of which have, unfortunately, given unsatisfactory results, although we must expect to see the problem solved in the future.

PROBABLE CLUTCH CHANGES.

To assist the engine in this direction by artificially giving its drive an elasticity which it does not possess to a sufficient

extent now, great attention has been devoted to the clutches. As a result, these have become less liable to disturbance, being all metal, and also more gradual and gentle in their action, and will become still more so as the time goes on, so that we must expect the coming automobile, if it follows the rational and relatively slow evolution which it is undergoing at present, to become the combination of two main elements. These are an ideally flexible engine supplemented by a smooth clutch, perhaps of the hydraulic type, but more probably on the metal-to-metal system. Possibly the perfect engine may eventually not require any clutch at all, but this, apparently, is not possible in our present state of knowledge. Besides these two principal elements there will be only a suitable mechanism to transmit the power direct to the wheels, perhaps avoiding in a mechanical and efficient way the use of the bevel gears which are presently one of our necessary evils.

DIVISION OF THE STRESSES.

Passing to details, an evident tendency in all classes of automobiles is to divide the stresses, whatever their nature, between the greatest possible number of parts, without, however, unduly increasing the complication of the machine, and to make and dispose every part so that it will have as few different stresses as possible to take care of.

In the machine of the future, the whole will apparently be so built that the independence of its different components will be such that no distortion or unexpected motion of the machine or of one of its parts can affect another portion of the mechanism, thus giving the car that elasticity which means strength and durability.

These two main points—elasticity and steady power with a flexible engine—are the two qualities which are to be found every year to a greater extent in all machines, and they are certainly those which will be the characteristics of the definitive automobile, if a mechanism can ever reach a definitive form.

Other well evident tendencies are toward automatic appliances, performing without the need of any attention the most important functions hitherto left to the care of the driver. Among these are especially lubrication and alteration of all the feeding and igniting conditions of the motor, according to the variations of the throttle opening.

APPLICATION TO MODERATE PRICED CARS.

In the lower priced cars we find that all the improvements found suitable for the highest grade of machines are conservatively taken up as soon as they can be fitted in a simple and effective enough way to produce a better article without making its price prohibitive; thus, in that direction four-cylinder engines are steadily growing in favor. These engines, too, are now often fitted with the most improved devices and fulfill all requirements of

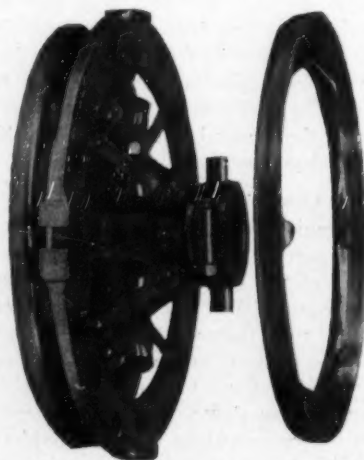
quietness, flexibility, and reliability. New clutches are worked out which are simpler than those originally found on expensive cars and are equally efficient; in short, these cars, as before stated, exemplify the useful application of the studies made upon the highest priced machines, but in a businesslike and inexpensive way.

In the commercial vehicle line no expression of a tendency can yet safely be proposed, as the designs of these machines are so widely different that the only thing that could be said concerning the future is an expression of the huge and growing demand there is for these vehicles, yet this cannot be considered a matter to be treated here.

In closing it should be added that, save for some of those machines which always appear to be made by men wanting to revolutionize the whole world in one day, there is a growing tendency toward an eventual, and at present involuntary unification of design, being a proof of a steady and healthy development of the industry.

Cork Inserts for Clutches.

The idea of using cork for producing friction between the members of a clutch, or between the drum and the band of a brake, seems at first thought anything but practicable, when the hard work to which



AUTOCAR CLUTCH WITH CORK INSERTS.

these parts are subjected is considered. Cork is nevertheless used for such work, and is said to give excellent results. The manner of using cork is to form recesses in one of the friction surfaces and fill these recesses with cork under pressure, smoothing down the inserts until their surfaces are practically level with the metal. The accompanying illustration shows a three-plate disk clutch with cork inserts in the central plate.

Patents covering the cork insert system are controlled by the National Brake & Clutch Company, of 16 State street, Boston. This concern does not manufacture clutches or brakes, but aims to induce manufacturers to adopt the cork insert or "Compo"

system under license. The owners of the patents state that the friction set up by the cork inserts is very great, while there is no tendency to seize or grip. While no attempt is made to explain the action of the cork, it is stated that dirt, oil, and the like, which would tend to keep the friction surfaces out of contact, are gathered up by the corks and thus the metal surfaces are brought into intimate contact. It is said that the compressed cork will not become soaked with water or oil and thus lose part of its frictional efficiency. The cork inserts wear no faster than the surface of the metal in which they are embedded. Manufactured cork—that is, cork ground up and compressed with a binder to keep it together—cannot be used, as it would soon disintegrate. Natural cork of a good quality, however, is said to have a remarkably long life when used for this work.

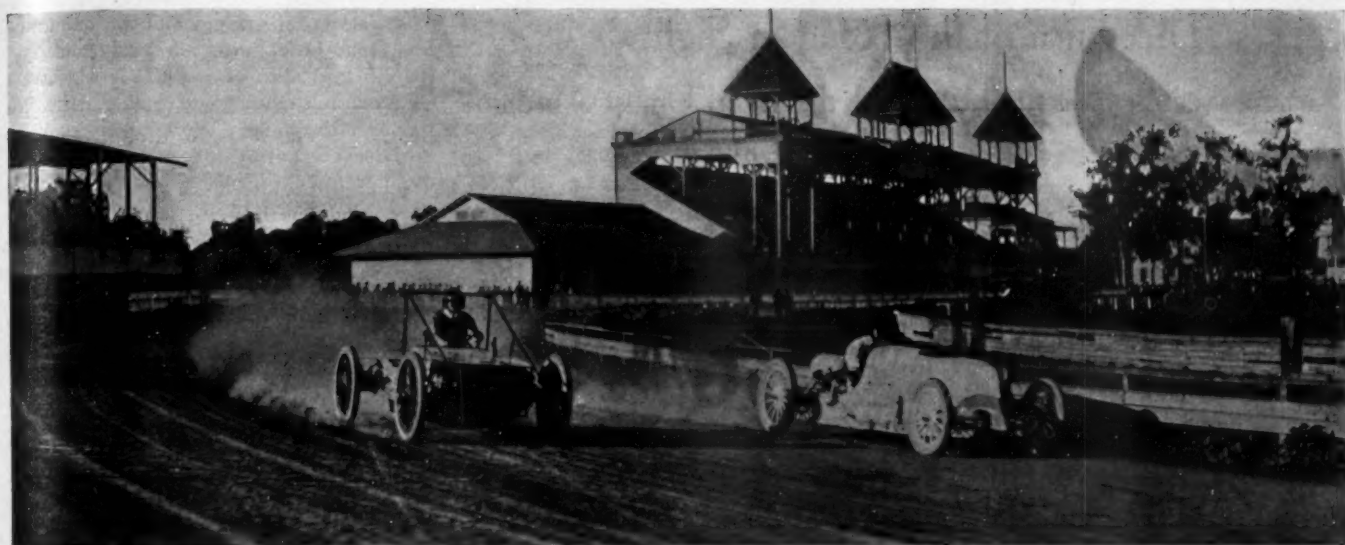
The cork insert system has been used for some time in loom clutches, in mill pulleys and clutches, hoisting engine frictions, and railway brake-shoes, and the patentees state that in all cases the results have been excellent. In the automobile field a number of cars have been experimentally fitted with clutches and brakes with cork inserts, and the Autocar Company, of Ardmore, Pa., regularly uses cork inserts in its clutches. The clutch illustrated is the one used in the Autocar, and it is stated that two thousand cars have been fitted with this clutch.

One of the claims made for the cork insert clutch is that it will hold much more efficiently than a clutch without corks, spring tensions being equal; or that the same holding efficiency can be obtained with a lighter spring. This is, of course, an advantage, especially in cars where much manipulation of the clutch is necessary. A stiff spring is apt to cause considerable fatigue of the foot and leg.

The National Brake & Clutch Company expresses its willingness to permit individuals to equip one clutch or one set of brakes with cork inserts for trial, provided application for permission is made in writing.

OPPOSED TO COACHMAN DRIVERS.

Entrance of coachmen into the ranks of chauffeurs is proposed by the National Professional Chauffeurs' Club, which last week issued a statement from the New York headquarters declaring that "a man is not qualified to take charge of and operate an auto unless he has had a few years' experience in machine shops." The club has appointed a board of examiners to question applicants for membership and put them through a series of tests in driving. Members of the club will, it is said, be forbidden to instruct coachmen in the operation of a car. A number of wealthy men in the East have placed their coachmen under the instruction of professional chauffeurs, finding that the coachmen are careful and experienced in caring for the bodywork and upholstery.



"WHISTLING BILLY" VS. STEWART-GARBUTT SPECIAL, AGRICULTURAL PARK, LOS ANGELES, CAL.

Bay State A. A. Will Be Busy.

BOSTON, March 26.—The hill-climbing matches on Parker Hill in Roxbury, last Sunday, seem to have started the ball a-rolling in that direction and much talk is being heard about future matches of the same kind and about a general hill-climbing contest for Patriots Day, April 19. Until last year it was customary for the Massachusetts Automobile Club to conduct a hill-climb on Patriots Day, but last year the practice was discontinued. The Bay State Association has usually held a race meeting on May 30, the two organizations thus dividing up the holiday automobile attractions. This year, it is understood that the Massachusetts Club will not conduct a hill climb, and President L. R. Speare, of the Bay State, and other officers have decided that that organization will hold a hill climb provided a suitable hill can be found.

The former contests have been on the Commonwealth avenue hill, but this grade is no longer formidable for machines of the size and power that are common to-day. Parker hill has been suggested, but, owing to its location and the nearness of street car tracks, it is not thought that it would be possible to conduct a contest which would attract a large number of people. Several other hills in the vicinity of Boston have been suggested, and the committee which will be appointed in a day or two by President Speare will make its first business the selection of a hill and the securing of a permit from the authorities to use it. As soon as a hill is selected, the entry blanks will be issued.

The Jackson Automobile Company, through its Boston representatives, the E. P. Blake Company, has offered a cup valued at \$100 for a match climb up Parker hill between the Jackson and any four-cylinder stock car or cars sold under \$3,500, the contest to take place within thirty days. The Morrison-Tyler Motor Company, whose

Maxwell won one of the Parker hill matches, has decided to donate the money which it won to some charity, and has appointed a committee of newspaper men to select the charity.

Besides the hill climb, the Bay State Association will, as usual, hold a race meeting at Readville on Memorial Day, May 30. The application for a sanction was sent in some time ago to the old racing board of the A. A. A. No action was taken upon it, but it was passed along to the new board recently appointed, and the association expects to receive a sanction in a short time. The race meetings of the Bay State Association at Readville have been considered the best and safest in the country. The association has oiled the track thoroughly and therefore prevented dust and accidents. Owing to existing rivalry among the dealers, at the May 30 meet the stock car events will be numerous.

Another competitive event in which the Bay State Association is likely to take an interest is the proposed economy, fuel, endurance, and tire test from New York to the White Mountains and return. W. J. Morgan was in Boston during the show and consulted with President Speare and other officers of the association. He found them in favor of his plan, so that if the contest is run in July, as proposed, there will be undoubtedly a large number of entries from this city.

Chicago Racing and Touring Events.

CHICAGO, March 26.—It is possible that Chicago will have an automobile derby this summer. The members of the racing committee of the Chicago Automobile Club have taken the matter up, and, if the famous Washington Park track can be secured, the event will be held there. It is possible that the park may be in such a

shape by summer that the deal cannot be put through, as it has been for sale for some time. Should the derby be held, however, there will be great sport for the enthusiasts. Contests for racing machines, touring cars, runabouts, and "freak" cars would be put on the program, together with obstacle races, climbing tests, and endurance runs. Should Washington Park not be secured, there is a possibility that Harlem race track will be taken.

It looks at present as though the proposed 1,000-mile endurance tour, starting from the Chicago Automobile Club, extending through Milwaukee, Rockford (Ill.), Bloomington, Indianapolis, South Bend, and ending at the place where the start was made, will be held this summer, as the local dealers' association is enthusiastic over the plan and is considering the proposition of giving it its support. It would take the place of the Glidden tour in the West and would give many an opportunity of engaging in such a run. There will be an effort made to secure the cooperation of the Chicago Automobile Club, the Chicago Automobile Dealers' Association, the A. A. A. and the clubs along the route.

Charles A. Coey, one of Chicago's dealers and most enthusiastic racing drivers, has been invited by E. R. Thomas to drive one of the three cars which his firm is building this year for the Vanderbilt Cup race. Mr. Coey has not accepted the offer as yet, as he may drive one of his own cars in the race.

Oldfield's Southern Circuit.

ATLANTA, GA., March 26.—Barney Oldfield and Paul Albert gave Georgians a taste of automobile racing at Piedmont Park, this city, on Thursday of last week. There was a large attendance at the races, which consisted of several events with local competitors, a match race, won by Oldfield from Albert, and a two-mile time trial by Oldfield in 2:35.

The Turn of the Road in Sight.

Evidence Accumulates that Around the Bend Unjust Automobile Antagonism Will Not Be Found.

There is a vast difference between condemnation and punishment of the reckless driver and obstinate antagonism to the advance of the automobile. Throughout the country accumulates evidence that serves to show how near is the dissolution of unavailing prejudice, and the farmer is succumbing—grudgingly but still succumbing—to the influence of the automobile and what it will mean to country folk in general. The unjust persecution of the law-abiding automobilist is arousing spokesmen in his favor, and the universal trend is toward the appreciated acceptance of the great boon of the age. Herewith are instances from all parts of the country:

An Ohio Farmer on the Automobile.

AKRON, O., March 26.—Though a farmer and a candidate for the nomination for county commissioner, C. N. Gaylord, of Stow, is ardently in favor of the automobile. He is president of the Summit County Horticultural Society, and in his annual address said:

"The farmers might as well make up their minds now as later that the automobile has come to stay, and where there is one now, in five years there will be five to ten. I know that they scare horses, and that is not the worst of it; they scare my wife as well. Notwithstanding all this, I am glad they are here. I presume some of you think this is strange when it comes in direct competition to our horse-raising. That is not to be considered for a minute, because these machines open up to our laboring men a vast field for employment in their manufacture, and this is a class that ought to be thought of first of all, for they are the backbone of our country.

"On the average, one of the machines, from the raw material to the finished product, means the employment of one man nearly two years. Then the pleasure those who are able to own one of the machines must take, after being shut up all day in office and city, in getting into one and taking a spin into the country. Then have stringent laws governing the machines while on the road, and enforce them."

It is agreed that Mr. Gaylord is one among a hundred, but, nevertheless, there is a strong likelihood that he will be nominated for the office he seeks. The horticultural meeting resolved itself into a good roads meeting, and the district senator was instructed to vote for the State good roads bill now before the legislature.

A California Opinion.

SACRAMENTO, Calif., March 26.—The *Union* prints the following: There are two sides to the story of automobiling in the park. Undoubtedly a great many people do run their machines there at a highly dangerous speed and deserve arrest. Roistering parties going to and coming from the

beach make a great deal of disturbance. But, on the other hand, many of the park regulations for automobiles are ridiculous, being made by Lloyd, Spreckels and Dingee, the commissioners, all three of whom are horsemen and opposed to the "devil wagons." The police, too, are very hoodlumish in their attitude toward the automobilists, and the stories told by some of our leading merchants about the language addressed to them by these policemen would make people think that they were in Russia rather than San Francisco.

Not an Evidence of Wealth.

BOSTON, March 26.—The *Transcript* comments in this strain: Speaking of automobiles and those who own them, doesn't it seem they have become so much an everyday possession that magistrates and other dignitaries who sit in judgment on troubles caused by mistakes of motorists should cease to think the word automobilist is synonymous with millionaire? Just the other day in New York a magistrate got very wroth with a physician, the driver of a motor car, who to avoid a bad place in the road had skirted along for a few feet on a lawn. So far as known the grass plot was not injured, but there was a policeman at hand and he thought it was an offense, and the next thing that happened they were all in court and the man on the bench was saying that he "was down on all the wealthy who violate laws." Many a man owns and drives an automobile to-day, for pleasure or for convenience, to whom the payment of a fine of \$10 is a matter of some moment. And while, of course, if he is guilty of breaking a law he should be just as liable as any other man, he does exist so frequently that it seems every court judge should be too wise to presume that owning an automobile is always an evidence of wealth.

Illinois Farmer Now Buys an Automobile.

PONTIAC, Ill., March 26.—This is from the *Leader*: Farewell, a long farewell to the automobile as a novelty. It is now a staple and comes under the head of vehicles and farm implements. When a man wants to buy an automobile now—counting out the millionaires—he does not go to the city to the accompaniment of a half-column flourish in the local paper; he goes down to his implement dealer and picks out a good, easy-running machine just as he would pick out a buggy or a corn planter. The country town dealers are buying automobiles in carload lots this year, and the hard-working single young man on the farm will henceforth buy an automobile instead

of saving up for a buggy built for one and a half. The little towns are really ahead of the cities in auto buying. That is because the small towns are content with single rigs run by one cylinder, while no automobilist in the city is anyone unless he has a \$1,000 machine fitted with \$2,000 worth of upholstery and driven by a four-cylinder ordinance smasher.

Discrimination in Greater New York.

BROOKLYN, N. Y., March 26.—Complaints are continually coming into the *Eagle* office from motorists who claim that the traffic squad, especially those mounted, discriminate against the motor vehicle. Only a few days ago a prominent Brooklynite had occasion to pass down Fourth avenue, which is laid out in Boulevard style, with a grass plot running longitudinally through the center. A mounted policeman was encountered when the car was on the right side of the highway, who held up his hand for the automobilist to slow down, although the car was not going beyond the limits of speed. At the same time a few rods in front three big loaded drays were passing down the avenue abreast, making it impossible for the motorist to get by without coming to a dead stop, and exerting the most careful handling. At the first crossing the other side of the street was taken to avoid the obstruction, only to find the same difficulty, a cavalcade coming abreast from the other direction. It seems again to be the same old story of forgetting that automobilists, as users of the highways, have equal rights with horsemen. In years to come this will be understood, and the present narrow and absent-minded attitude of some members of the traffic squad will appear incredible.

What Appeals to the South.

ALBANY, Ga., March 26.—The *Herald* in its editorial columns wisely states:

"The introduction of automobiles into the South should be encouraged, for every one transforms its owner into an ardent advocate of better public highways."

Minnesota Joins the Chorus.

DULUTH, MINN., March 26.—The *Herald* comments wisely: "Duluth will have a great many automobiles this summer, according to report. The more automobiles, the more good roads agitation."

Automobiles will soon be adopted as public carriages in Italy, where they are increasing rapidly in number. Two new Milan companies plan to operate automobile services in Lombardy and eventually to install such service in all parts of Italy, according to the British consul at Naples. The use of power boats has increased greatly at Naples, where they are becoming very popular for pleasure use, and in summer are safe enough for practical purposes of coasting and running across to the islands in the Bay of Naples.

The Laying of the A. C. A. Cornerstone



PRESIDENT MORRIS.

It was a shivering crowd composed mainly of the "Old Guard" of automobilizing that gathered on Wednesday, March 21, on the north side of Fifty-fourth street, between Broadway and Eighth avenue, to participate in the ceremonies attending the laying of the cornerstone of the new home of the Automobile Club of America. The searching March wind encouraged record-breaking speed in the brief and simple ceremonies that occupied scarcely a score of minutes.

President Dave Hennen Morris in the opening address referred to the substantial growth of the club, and making particular mention of the cornerstone said: "This monument of stone should not typify only the idea of pleasure and sport, but all that is best in the future of automobilizing. It should stand as a vital force of our modern civilization and illustrate at all times what is best and most serviceable in the future development of the motor industry."

Dr. Schuyler Skaats Wheeler performed the actual laying of the cornerstone. He said that the ceremony symbolized more than the mere construction of the building. "It stood for the erection of a structure having many features to facilitate and encourage the use of the horseless vehicle, its safe keeping, the improvement of the many branches of the mechanical arts, the making of actual tests and measurements, and to serve as headquarters from which may be conducted the work of improving the outside conditions relating to transportation."

Deposited in the cornerstone were the following: "A History of the Club," by George F. Chamberlin; the club book, the club badge, the present automobile laws of all the states, maps showing good roads, published by the club for the use of its members; a model of an automobile, a pair of touring goggles, a statement of aerial flights by the Wright brothers, the proof-sheets of "Three Men in a Motor Car," by W. E. Scarritt; a prophecy, "The Future of the Automobile," by Albert R. Shattuck; a book, "A Journey Through Other Worlds; a Romance of the Future," by Colonel John Jacob Astor; current numbers of the automobile trade journals, the silver coins of the United States, and the daily newspapers of New York City of March 20, 1906.

Ex-President A. R. Shattuck then essayed to prophesy concerning the future of the automobile. He said:

In the Bible are found the following words: "The chariots shall rage in the streets, they shall jostle one against another in the broad ways; they shall seem like torches, they shall run like the lightning."

One hundred years ago who then dreamed of the wonders the twentieth century has produced? The wonders of electricity? The wonders of steam?

In this age the telegraph is giving place to the telephone and to wireless telegraphy, the compound steam engine to the turbine engine, the horse to the automobile. Assuming we make as much progress each decade to come as each decade passed, who can say this prophecy will not come true?

The horse will become a draft and riding animal. The traffic of the world will be carried on broad, dustless highways by the automobile. The railway will fall into disuse, its cost will be wealth lost. There will remain but "a right of way and streaks of rust."

The automobile in its turn will disappear, to be replaced by the flying machine, and our children's children will wonder why their forefathers crept along dusty roads harassed by speed laws, as they shoot through the air, even to other stars, and say, with Emerson, "Hitch your wagon to a star."

The ceremony closed with a short prayer by the Rev. W. Merle Smith, of the Central Presbyterian Church.

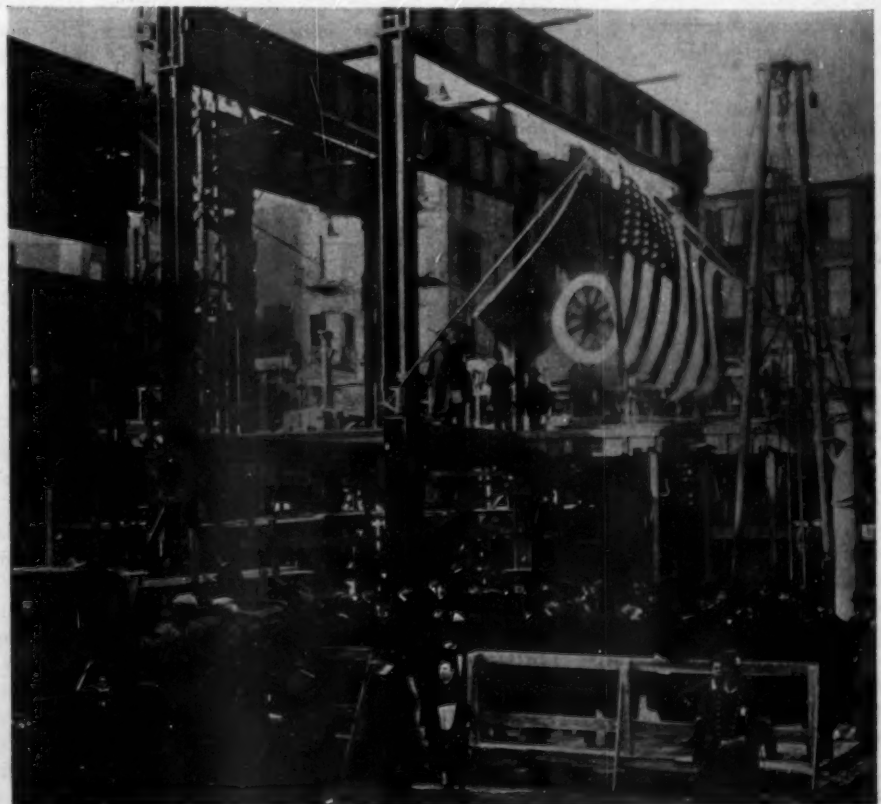
Among the notables present in addition to the principal actors were the following: Ex-President W. E. Scarritt, Gen. George Moore Smith, George F. Chamberlin, Jefferson DeMont Thompson, Street Commissioner Woodbury, S. H. Valentine, Cortland Field Bishop, Colgate Hoyt, Capt.



THE LAYING OF THE STONE.

Homer W. Hedge, Augustus Post, Ward Chamberlin, Ernest Flagg, H. M. Swetland, S. W. Taylor, Sidney Bowman, Frank Eveland, Emerson Brooks, Carl Page, W. H. Hurlburt, E. B. Gallaher, A. E. Ranney, J. E. Jarrige, A. D. P. Smith, Elliott Mason, and, of course, S. M. Butler, the indefatigable secretary.

The new clubhouse will be eight stories high, with a front of granite, white brick, and terra cotta.



CEREMONIES OF LAYING THE CORNERSTONE OF THE A. C. A. CLUBHOUSE

Among the Automobile Clubs.

Germantown's Energetic Body One of the Best and Most Substantial in Pennsylvania—Its Great Road Project.

PHILADELPHIA, March 26.—The most active automobile organization in the state of Pennsylvania, and one of the few in the country which owns its own modern clubhouse, is the Automobile Club of Germantown, located at Greene and Carpenter streets, in the heart of the historic suburb from which it takes its name.

Starting less than two years ago with a handful of members, it built a handsome clubhouse and garage, intended for the accommodation of not more than 100 members. That limit was reached almost before the club had settled in its new home, and was successively raised to 150 and 200, the latter figure being the absolute limit until the accommodations can be increased. That increase of facilities, is indeed, already under consideration, and, with the membership now totaling 185, of whom over 125 are owners of cars (the garage can accommodate but 40), it will be seen that the proposed improvements cannot be begun too soon.

The Germantown club is composed of some of the most prominent professional and railroad men, manufacturers and merchants in the city—for its membership is drawn from all sections of the municipality—and its voice is always heard when matters of public policy appertaining to the sport or to the welfare of its especial section come up for discussion or decision at the polls or elsewhere.

Just recently—at its annual dinner, in fact—the club decided to take up the project of the Philadelphia-Pittsburg road in earnest, and its officials are now hard at work endeavoring to secure the co-operation and support of automobilists along the route in an effort to begin at once the improvement of at least a portion of the route, with the assistance of the State Highway Department. This route is but 284 miles in length, as compared with the railroad distance of 355 miles, and passes through Paoli, Lancaster, Columbia, York, Gettysburg, Chambersburg, Bedford, Greensburg, Irwin, Turtle Creek, to Pittsburg.

It is the intention of the Germantown club to take advantage of that provision of the new good roads law by which the state will pay 75 per cent. of the cost, the remaining 25 per cent. of the cost being divided equally between the county and the township. The state's portion of this money is lying in the treasury, and it is the intention of the club to work unceasingly in an effort to arouse the counties and townships along the route to the advisability of making a start at once. Almost the entire distance will be over roads which at one time formed a main trans-state highway, turnpiked as in those days the road sharps thought ideal.

Some of it is still kept in condition varying from fine to fair, but for most of the route the roads have been allowed to deteriorate till they are at some points little better than country roads. Some sections of this across-Pennsylvania highway is still cursed with the toll system, and this it is the purpose of the Germantown club to fight tooth and nail.

Now that an energetic organization has been formed to lead the fight, it is highly probable that within the next two or three years it will be possible for an automobilist to drive his car from Philadelphia between sunrise and sunset without fracturing the speed laws.

Activity of the Salt City Club.

SYRACUSE, March 27.—One hundred and ten members, an increase of 35 over the number of a year ago, shows the Automobile Club of Syracuse to be a growing organization. Fully 150 members are expected before the close of the summer, as new applications are in sight. The club is very active in the councils of the New York State Automobile Association of the A. A. A., and it supplies the state secretary in F. H. Elliott.

"Membership in the club is getting to be appreciated the more," said an officer, "since it has become more generally known what our objects are, especially in regard to courtesy toward all equipages and their drivers, observance of the rules of the road and such matters. The club stands for these, and the pennant of the club is becoming known throughout the section as a guarantee of the right spirit on the road. Episodes like that of last summer, when a member of the local club went fourteen miles out of his way to assist a vehicle which had broken down, are changing public opinion hereabout in regard to automobilists. Of course there are some exceptions, and these we do not want in our club. It is a matter worthy of note that the percentage of accidents occurring in this region, through the use of automobiles, is remarkably small. This fact is mainly attributable to owners largely driving their own machines. It is well known that a chauffeur, generally speaking, is less reliable and more apt to lose his head in a tight place."

The matter of road signs in this county is receiving careful attention. The first of these to be put up will be the danger signs, which will go in such localities as East and West Camillus Hill, Tully Hill and similar elevations where it is advisable to exercise special precaution. Another matter to receive attention is the placing of precautionary signs on the outskirts of the various cities and towns in the region. On

these signs will be placed the extreme rate of speed allowed by the community approached.

The signs directing drivers from town to town involves a greater work in the ascertaining of distances, provision for all cross roads and similar points of procedure, but it is stated that this matter will receive as careful attention as the others and work in all departments of this enterprise will be begun as soon as the roads are fit for traveling in the spring. Committees of the club are in charge of the work north, south, east and west of the city and intend to make the job a thorough one.

It is understood a proposition will be made to the club to have a third annual race day at the New York State Fair this fall. The success of the meet held last year was beyond all expectations, and some thousands of dollars went on the right side of the ledger, as the events attracted more than 10,000 persons.

The Energetic Long Islanders.

BROOKLYN, March 26.—Dr. C. B. Parker, winner of the 1905 Economy Test of the Long Island Automobile Club, has taken the chairmanship of the Runs and Tours Committee of that organization. A. R. Pardington, finding it impossible to give proper attention to the chairmanship of the committee, insisted upon the acceptance of his resignation. The Long Islanders intend to begin immediately the erection of suitable signs at crossroads throughout Long Island, and will ask the co-operation of the American Automobile Association in the work. The Runs and Tours Committee have under consideration the matter of a Brooklyn parade.

President Dick Leads the Quakers.

PHILADELPHIA, March 26.—The annual election of the Automobile Club of Philadelphia was held at the Manufacturers' Club last week, and, as expected, the slated ticket went through without opposition, William A. Dick being chosen president; Henry H. Roelofs, vice-president; J. Maxwell Bullock, treasurer, and H. Bartol Brazier, vice-president. The secretary's report showed 289 members. Alfred N. Chandler was made chairman of a committee on increased membership.

SPRINGFIELD, MASS.—The Automobile Club of Springfield is planning a club run in June, to extend over several days. Several routes are now under discussion. It is expected the automobilists from Holyoke and Worcester will participate. The Springfield club is eager to become active and increase its membership this season.

The Midland Railway Company of England has been making further experiments with motor trains on the London to Manchester route. The cars are built on the lines of the new electric trains and seat fifty passengers comfortably.

Hotchkiss Declining, Quayle Succeeds.

SYRACUSE, N. Y., March 26.—Yates Hotel was the scene of the third annual meeting of the New York State Automobile Association on Saturday afternoon, March 24. The clubs in attendance and the delegates representing them were as follows: Automobile Club of America, Emerson Brooks, New York; Automobile Club of Buffalo, W. H. Hotchkiss, August H. Knoll; Automobile Club of Syracuse, H. H. Franklin, F. H. Elliott; Binghamton Automobile Club, Norman M. Pierce; Rochester Automobile Club, H. S. Woodworth; Albany Automobile Club, O. A. Quayle; Automobile Club of Auburn, S. C. Tallman.

Mr. Hotchkiss, for two years president of the association, declined re-election despite strong pressure brought to bear on him to reconsider. The new board of officers chosen at the meeting is as follows: President, Q. A. Quayle, Albany Automobile Club; vice-president, H. S. Woodworth, Rochester Automobile Club; secretary and treasurer, F. H. Elliott, Automobile Club of Syracuse.

Mr. Quayle has been the vice-president since the formation of the association, and a member of the legislative committee. He is well known among automobilists throughout the state, and has handled the bulk of the legislative business for the association. Mr. Woodworth, the newly elected vice-president, is prominent among automobilists in the western part of the state and has been a director of the state association since its incorporation in December, 1903. F. H. Elliott, re-elected secretary and treasurer, has held the office since the association

was formed and was practically its promoter and organizer.

The secretary's report showed a total of 17 clubs with 2,305 members. Every known organized club in the state is a member of the Association. Five clubs have been added in the past year with 757 members. Two years ago there were but 9 clubs with 1,253 members. The largest club is the Automobile Club of America, New York, with 842. Then follow Buffalo, 577; Long Island, 213; Rochester, 193; Syracuse, 103.

The Association has a good financial balance. Emerson Brooks, chairman of the Good Roads Committee, reported that the Association was lending its support. Giles H. Stilwell, of the Legislative Committee, discussed pending bills in the legislature. The directors are in sympathy with the movement to increase slightly the fee for registration of automobiles, but are opposed to excessive taxation. They advocate the passage of a bill by which the funds received from the automobilists shall be used for the benefit of the state highways. A resolution was passed placing the matter in the hands of the Legislative Committee, which was to hold a conference at the Ten Eyck, Albany, on Wednesday of this week.

The meeting heartily favored the plan of Charles T. Terry, of New York, who was the guest of honor at the recent annual banquet of the local club. His idea is that the clubs be a sort of clearing house for complaints against automobilists for reckless driving. The aim is to do justice in all cases.

At the Century Club, Saturday evening, all the directors who attended the meeting, and C. D. Hakes, secretary of the Albany club, Giles H. Stilwell, of Syracuse, President W. L. Brown, and Secretary Forman Wilkinson, of the Automobile Club of Syracuse, were guests at an informal though elaborate dinner given by H. H. Franklin.

General Club Doings.

ALTOONA, PA.—Blair county is in line and a new club has been formed with twenty-five charter members. R. H. Fay has been elected president and W. H. Wolfe secretary. The organization will be known as the Blair County Automobile Club and will be affiliated with the state organization.

LANCASTER, PA.—The Lancaster Automobile Club has elected the following officers for the coming year: President, Dr. S. T. Davis; vice-president, Philip H. Schaum; secretary, Jacob D. Rider; treasurer, Dr. Parke P. Breneman. The board of directors includes the above officers and H. M. Hillegas, Dr. H. S. Roop and Martin Kinports. It was decided to affiliate with the Pennsylvania Motor Federation. The club has succeeded in getting the tolls reduced from six to two cents a mile by the Danville Turnpike Company.

MINNEAPOLIS, MINN.—Plans are being made by the Minneapolis Automobile Club to connect the twin cities with an auto driveway by way of the picturesque Minnehaha Falls, of which Longfellow wrote so feelingly. At a recent meeting of that club it was decided to take permanent quarters at the Plaza Hotel. Plans are also being formulated to form a state automobile association, in order that the roads through the state may be improved.



CENTRAL PARK IN NEW YORK CITY, MARCH 24—A CHADWICK STOPPED FOR EXCEEDING SPEED LIMIT.

Letter Box

Proposed Glidden Tour Route.

Editor The Automobile:

[325.]—In all of the suggestions for routes for the touring competition for the Charles J. Glidden trophy this year, and the various criticisms of those proposed, no good reasons have been advanced for penetrating into Canada except the scenic attractions and the interest to the tourist possessed by the cities across the border. Although good in themselves, these do not offset the drawbacks of bad roads, customs annoyances, and the lack of beneficial interest in automobiling among the Canadians. Any benefits that can accrue from such an event—such as diminished opposition to automobiling, more liberal laws, and accessions to the ranks of owners—should be realized at home rather than in a foreign country.

Since the Glidden cup was won last year by a resident of Buffalo and a representative of one of the leading automobile manufacturing companies of America which is located in that city, the logical starting place for the 1906 tour seems to the writer to be at Buffalo, as a matter of courtesy to last year's winner. Aside from this, Buffalo has good claims to recognition among the automobile fraternity, and the reasonable desire of the Westerners to have the tour either start or finish as far west as possible would be fairly well met by such a selection. Buffalo is easily and cheaply reached by boat from Cleveland, Detroit, and Chicago, while it is fairly central by road between the East and West.

Mr. Glidden, donor of the trophy, has expressed the natural desire to have the tourists make Boston, his home city, a stopping place for at least one night, and as there is nothing unreasonable in the wish, it would be fitting if this were done.

Finally, New York, the acknowledged center of automobile interest in America, is a natural place for the finish and a good point for dispersal of the contestants.

Between these three points there should be a wide digression to afford variety of scenery and to increase the mileage to the 1,000 mark. For the reasons given, the writer suggests that the tour start at Buffalo and make Syracuse (approximately 150 miles) the first night stop, continue eastward down the Mohawk valley to Albany or Saratoga (about 140 miles) for the second night stop, then turn north and follow up the west side of the Hudson river and Lakes George and Champlain, through Elizabethtown and Plattsburg, skirting the Adirondack mountains and arranging night stops with regard to the distances, road conditions, and hotel accommodations.

In favor of the Mohawk valley route is the fact that it is one of the most important through routes in the country and is in great need of missionary work to accomplish the improvement of the roads. Moreover, it was the route selected for the first long-distance endurance run in America—the New York-Buffalo trials of 1901—and a tour over the same course five years later will form an interesting basis for comparison as a means of showing the advancement made in automobile engineering and construction.

Effect a crossing of Lake Champlain wherever convenient—if possible, by railroad ferry from Plattsburg to Burlington, Vt., or, if necessary, at Rouses Point, at the north end of the lake or at Ticonderoga at the south end. If Burlington is reached, reasonably level roads could probably be found on a route following the Central Vermont rail-

road through the Winooski river valley to Montpelier and thence down the White river valley to the Connecticut river; or, if the tourists wish to repeat last summer's most enjoyable visit to the White mountains, the line of the M. & W. railroad can be followed down the Wells river valley through Woodsville and up the Ammonoosuc river along the line of the Boston & Maine to Bretton Woods.

Boston can be reached by any suitable route, preferably different from the one of last year, and the run from Boston to New York can be by way of Providence and Hartford—avoiding Worcester naturally.

Objections that the country is mountainous in Vermont and the roads not good are hardly sufficient to stand in the face of the tour of 1905 through New Hampshire and the endurance run of 1903 to Pittsburg. The route would offer the greatest diversity of scenery and traveling conditions, would penetrate six states and pass through probably the greatest possible number of large cities especially interested in automobiling and the automobile industry. P. W. H.

New York.

Concerning American Racing Cars.

Editor The Automobile:

[326.]—Through patriotism and the ownership of an American car, I have become interested in American racing machines. The American is a good copyist and extremely original, but his originality seems to be his ruination in the racing line. The foreigners are many years ahead of us in automobile building and their methods of building cars have been refined carefully by age. It will take the same number of years to perfect the "freak" to such an extent that it will be able to compete with these well-tried-out types of automobile construction.

In the meantime, let us stick to the old lines and become copyists (not so much of the foreigners' but our own work), when it comes to going before the world with what should be the pick of our cars in the big cup races. Let those who favor these freaks make them perfect before we allow the honor of America to rest on such a fragile base. When they have done so, let them be welcome.

Glance over a list of the American freaks entered in the elimination trials for the Vanderbilt cup. In the trials there were only two cars of conservative racing build, one of which took first place and the other second. In the cup race which followed these same cars were the only ones running at the finish, one of them third and the other running well but in poor position through no mechanical fault.

Is not this a lesson by which our owners should profit in the teams sent to the Grand Prix and the next Vanderbilt Cup race?

William Remington.

Asbury Park, N. J.

New Roadways to Meet Modern Needs.

Reprinted from the New York "Tribune."

To the Editor of the New York "Tribune":

Sir:

Sunt quos curriculo pulverem Olympicum Collegisse juvat.

[327.]—So sang Horace two thousand years ago, and human nature has not changed much since. The automobilist says to himself and his friends: "It is a marvelous invention. Its speed is exhilarating. Its numbers are increasing every year. It has come to stay. The horse has got to go. As for pedestrians, they ought to get out of its way." All of which seems to him entirely reasonable. Logically, it leads to the conclusion that in the more distant future our thoroughfares are to belong solely to motor cars.

The anti-automobilist, on the other hand, says: "Our streets and highways were laid out during the nineteenth century for the use of pedestrians and horse-drawn vehicles. For that use they were then ample, though some of them have become crowded and congested now. To thrust into them a third species of locomotion, of which greater capacity for speed and much less facility of stopping, is simply to promote confusion and delay, and to invite disaster to life and limb. Horses are also increasing in number, and so are pedestrians, as the city and country increase in population. For public safety and convenience, all vehicles should be required to go at similar rates of speed." All of which is based on common sense, but offers small comfort to those who love to ride in motor cars.

Now, if some dispassionate observer could be put in a place of comparative safety—say the top of a tree on a country road or the top of a skyscraper in the city—he might watch the scene. Looking down on the buzzing swarm that strives and twists in the roads below, the irresistible conclusion to his mind would be, "Why, this is an attempt to achieve the impossible! The wisdom of ages has taught us that no man can get a quart of wine into a pint bottle. Yet here we are trying to force three processions into roads made for only one or two. If, as we are assured, all three are increasing in number and all are entitled to their normal rate of speed, then there is nothing ahead but a deadlock or a smash. Clearly, the remedy is to open new roadways for the swift-moving motors, or, if it is decided to give up the old ones to them, then to open new roads for the horse-drawn vehicles and the pedestrians."

The expedient would not be a new one. When locomotives were invented, eighty or more years ago, the attempt was made to use the public highways for their rails. It was soon discovered that it would be better, both for the railway companies and the general public, that they should have roads of their own.

So, not very many years ago, when it became the fashion to drive fast trotters, their use on the city avenues became intolerable. The difficulty was happily solved by the construction of the speedway and the race-courses, where the drivers can speed to their hearts' content and the public can stand by and "watch the wheels go round."

Frederick W. Seward.

Montrose-on-the-Hudson, N. Y.

AN EXAMPLE TO BE FOLLOWED.

Mr. Smith, of Cartersville, Ga., has the right idea, and from the Cartersville News the proof is herewith given:

"M. D. Smith, who recently moved from Dalton to Cartersville and has charge of the manufacturing enterprise in the old court house, will bring with him for the use of himself and family an automobile. Some anxiety has been felt by the ladies who are accustomed to drive horses on the streets of Centerville lest the automobile frighten the horses and make driving more dangerous.

"Mr. Smith is very anxious to relieve all anxiety on this score and asks the 'News' to say that every precaution will be used by him to avoid frightening horses. Any person who has a horse that shows a disposition to shy at the automobile is asked to go out on the road with Mr. Smith and let the horse become accustomed to the machine. Horses soon become acquainted with these automobiles and after one or two meetings, if properly handled, pay no attention to them. Mr. Smith will use every precaution to avoid frightening horses."

The Busy Automobile Lawmakers.

One Bill, and Excellent, Passed at Albany, with Other Measures Pending—What Is Happening in New Jersey.

ALBANY, N. Y., March 26.—Automobile or motor vehicle legislation is moving. One measure passed is Assemblyman Cox's bill amending the present law by inserting in the section, which now permits the automobilist on being arrested to give a cash bail or leave his motor vehicle as security, a provision that he may be released from custody on giving "a bond or undertaking executed by a fidelity or surety company organized under the laws of this state and having a deposit of at least \$200,000 with the superintendent of insurance of this state, said bond or undertaking to be in an amount not exceeding the maximum fine for the offense with which the owner is charged and to be conditioned for the owner's appearance in answer for such violation at such time and place as shall then be indicated." This bill now goes to the governor, who will sign it, as there has been no opposition to it in the Legislature.

The Senate Committee on Taxation reported favorably the bill introduced by Senator L'Hommedieu to tax motor vehicles and use the money for the maintenance of good roads. The bill was reported under an agreement between Senator L'Hommedieu, the committee and O. A. Quayle, of the New York State Automobile Association, that if a hearing was desired Thursday, March 29, the bill should be recommended for the hearing.

The provisions of this bill in its last amended shape are interesting to every owner of a motor vehicle. They are as follows: The present law is amended to provide for additional information to be furnished the Secretary of State about the weight of every motor vehicle heretofore or hereafter registered. The new matter reads:

Every person owning a motor vehicle, who has not filed a statement in pursuance of this section in which the weight of such vehicle is specified shall, on or before June first, nineteen hundred and six, file in the office of the secretary of state a supplemental statement of the name of such owner, the registered number of his motor vehicle, and the weight thereof. The weight of a motor vehicle includes the weight of the tires, lamps, top, and other equipment ordinarily used therewith.

The act is then further amended by adding thereto the following new sections to be numbered sections nine, ten, eleven, twelve, thirteen, fourteen, and fifteen, respectively, to read as follows:

Sec. 9. State tax on motor vehicles.—An annual state tax of one dollar per vehicle, and an additional fifty cents for each five hundred pounds or major fraction thereof in the weight of such vehicle exceeding five hundred pounds is hereby imposed upon every motor vehicle except motorcycles owned by a resident of this state except a motor vehicle owned by the manufacturer thereof, or by one whose principal business is that of a dealer in motor vehicles, but

this exception shall not apply to a motor vehicle in the usual personal use of such manufacturer or dealer; nor shall the tax be imposed on motor vehicles constructed, owned and used for the transportation of goods, wares or merchandise, nor on any motor vehicle regularly let for hire and which is operated wholly within the corporate limits of a city. The tax shall accrue and be based upon the ownership of such vehicle on June first of each year. In case of the acquiring of the title of a motor vehicle after June first of any year, other than one upon which the tax has been paid, the tax shall accrue with such title and be paid pro rata for the remainder of the year. The filing of a statement of weight of any vehicle registered with the secretary of state shall not preclude the secretary of state from determining the weight of any vehicle subject to tax. The term owner as used in this section and the subsequent sections of this act includes a vendee having the possession of a motor vehicle under a contract of conditional sale, although the legal title to such motor vehicle remains in the vendor.

Sec. 10. Lien of tax and payment thereof.—The tax imposed by this act upon a motor vehicle, together with any unpaid interest thereon, shall become a lien upon such vehicle on the date of the accrual of such tax. Within thirty days after such tax accrues, the owner of each such vehicle shall transmit to the secretary of state the amount of such tax; and the secretary of state shall issue to such owner a receipt thereof, specifying the name of the owner, the registration number of the vehicle on which the tax is paid, the weight thereof and the amount of tax paid. If such tax is not paid within thirty days after the same accrues, the amount thereof shall bear interest at the rate of two per centum a month.

Sec. 11. Effect of failure to pay tax.—If such tax is not paid within thirty days after the same accrues as required by this act, the owner of such a motor vehicle, notwithstanding his registration under this act, shall forfeit all rights acquired thereby, and shall be subject to the same penalties and liabilities, civil and criminal, for operating such vehicle upon the public highways, as if such vehicle were not registered. On the first day of June following the passage of this act the secretary of state shall prepare printed lists giving the numbers, owners' names and addresses contained in the applications for registration of automobiles on file in his office, and shall furnish a copy of the same by mail to the police department of every city and incorporated village in the state. On the first day of every month thereafter he shall prepare and distribute as aforesaid supplemental lists of all registrations during the preceding month.

Sec. 12. Collection of tax.—If the tax imposed on a motor vehicle by this act is not paid when due, the secretary of state may enforce its collection, with accrued interest, by an action against the owner thereof on the date when such tax accrued, in any court of competent jurisdiction; or he may issue his warrant under his hand and official seal, directed to the sheriff of any county of the state, commanding such sheriff to levy upon and sell the motor vehicle on which such tax and interest is a lien, if the same can be found within his county, for the payment of the amount of such tax, with accrued interest thereon and cost of executing

the warrant, and to return such warrant to the secretary of state and pay to the state treasurer the money collected, by virtue thereof, at a time to be therein specified, not less than sixty days from the date of the warrant. The sheriff to whom any such warrant shall be directed shall proceed upon the same in all respects with like effect and in the same manner as prescribed by law in respect to execution issued against property upon judgments of a court of record, and shall be entitled to the same fees for his services in executing the warrant to be collected in the same manner.

Sec. 13. Exemptions from other taxation.—The taxes imposed by this act upon motor vehicles shall be in lieu of all other taxes, general or local, to which motor vehicles as personal property may be subject under the laws of this state; and the owner of such a vehicle in the assessment of a tax provided by this act shall not be entitled to any deduction for debts owned by him either on account of the purchase of such vehicle or otherwise.

Sec. 14. Payment of tax before registration of motor vehicles.—The secretary of state shall not hereafter register any motor vehicle pursuant to this act, unless at the time of filing the statement required by section two of this act, the owner of such vehicle shall have paid such tax for the then current year, but if the motor vehicle for the registration of which application is made was not owned by a resident of this state on the date fixed by this act for the accrual of taxes for the then current year, such owner shall only be required, in order to procure registration of such vehicle to pay a tax proportioned to the length of time between the date when such a motor vehicle was owned within the state, and the first day of June succeeding.

Sec. 15. Application of taxes and filing fees.—Taxes and filing fees collected in pursuance of this act shall be paid into the state treasury, and shall be expended under the direction of the state engineer and surveyor for the repair and maintenance of highways constructed under the provisions of chapter one hundred and fifteen of the laws of eighteen hundred and ninety-eight, and the acts amendatory thereof and supplementary thereto.

More of the Albany Grist.

The Lee bill to make motor vehicles reduce speed to a mile in six minutes within twenty rods of every horse or draft animal it meets and come to a full stop within ten rods unless the rider, driver, or leader of the animal has graciously nodded or waved a permission to proceed, is going through the Assembly without opposition so far, and is already on third reading. It is believed that it will be challenged when it comes up for third reading and defeated.

The Situation at Trenton.

TRENTON, N. J., March 27.—The Frelinghuysen bill now rests in the hands of the Judiciary Committee of the Assembly. Exactly in what form it will emerge is extremely doubtful, the impression prevailing that it will be shorn of its obnoxious features. Senator Frelinghuysen is so much exercised over this probability that he threatens to introduce another measure fully as distasteful to automobilists, but his motorphobia is of such a pronounced character that he is not attracting as much serious attention as he did.

State or City Registration, or Both?

That Is the Bothersome Question Which Now Confronts the Automobilists of the Quaker City.

PHILADELPHIA, March 26.—"On the field of battle a general officer supersedes a colonel, and when a superior appears the general officer is superseded," said Attorney-General Carson before the Supreme Court last Friday, when arguing that the state automobile license law had precedence over any municipal regulation. When Congress passed a national bankruptcy law all state bankruptcy laws were suspended. In the same way the state automobile law supersedes the city ordinance."

The Attorney-General delivered a forcible argument, punctuated with similar good points, and when he had finished Chief Justice Mitchell announced that the Court would hold the matter under advisement.

The case had been brought up on appeal from Common Pleas Court No. 4, which had decided that the city had a right to charge a local license fee of \$2 in addition to that of \$3 provided for by the State law. Ira J. Williams, the attorney of the Automobile Club of Philadelphia, in arguing for a reversal of the lower Court's decision, claimed that the city cannot compel the taking out of a license for anything the State has already licensed.

"The city," he said, "is a mere creature of the state, and exists only by the power of the state. There is a conflict of authority, therefore, when the city refuses to recognize a license issued by the state. A Philadelphia license will not hold good in Montgomery County, five miles from the City Hall, and rightly. A state officer would refuse to recognize it. Such a condition would establish a precedent which would enable every hamlet, borough, village and city in the state to require similar local licenses, and confusion without end would result."

Assistant City Solicitor Alcorn, for the city, argued that should the argument of counsel on the other side prevail, it "would be impossible for the city to say that the minimum speed for cities—ten miles an hour—is too great for Chestnut street, and should be reduced. According to the state law no other than the state tags shall be carried on the front and rear of a machine. The city does not conflict with that. The local ordinance merely requires that the city tag shall be exhibited. It may be put anywhere on the car."

Many local automobilists fear that the city's contention will be upheld.

Slow to Register in Indiana.

INDIANAPOLIS, March 26.—One would not infer from the standpoint of Secretary of State Storms that the automobile industry is one of the largest in this state, taking

into consideration the reluctance of automobile owners to register their cars with the state.

Since the law went into effect last June, just 2,726 cars have been registered, only 71 of which have been registered in 1906. So far there have been few arrests for failure to have state numbers and there is no general inclination to get them. Automobile authorities say there are at least 4,000 automobiles in operation in the state, about 600 of which are owned in this city.

Nothing Probable in Ohio.

COLUMBUS, O., March 26.—It is doubtful if the General Assembly of Ohio will enact any legislation affecting automobiles at this session. On Thursday the house spent much time discussing the Bowers bill, requiring the registration of automobiles with the county auditor, and finally sent it to the foot of the calendar, to keep company with the Sawicki bill, which provides that the registration shall be with the Secretary of State. There was a diversity of opinion among the members as to which bill should be passed, and meanwhile further consideration of their relative merits will be made.

Quebec's New Automobile Regulations.

MONTREAL, March 26.—Quebec has a new law on its statute books which requires the licensing of motor vehicles, the Provincial legislature having passed the bill recently introduced by the Hon. Mr. McCorkill. The bill was aimed principally at the owners of foreign machines, who, dashing into the Eastern townships from the American frontier, disregarded all laws of safety and endangered the lives of pedestrians and others by their reckless driving.

The act requires that every person acquiring a motor vehicle shall, for every such vehicle owned by him, file in the office of the Provincial Treasurer a statement of his name and address, with a brief description of the motor vehicle to be registered, with the name of the manufacturer, factory number, style of vehicle, motive power and strength thereof, on a blank to be supplied by the Provincial Treasurer for that purpose, and he shall pay a registration fee of \$5, and that such fee shall be sent in with the application.

Owners of automobiles who reside in other Canadian provinces are not required under the new law to register in Quebec provided their machine bears number indicating registration elsewhere, and they give notice in writing to the clerk of the municipality in or through which they make use

of their vehicles. Owners or operators of automobiles who do not reside in Canada must furnish a satisfactory bond to the Provincial Treasurer for an amount of \$500 as security for any damage which may be caused by him in operating his automobile in the province of Quebec. The Provincial Treasurer may, however, make individual exceptions to this provision if he sees fit. Non-Canadians must be provided with registration tags from their respective communities and comply with the formalities of notification of municipalities.

Every person desiring to operate an automobile otherwise than as a chauffeur must obtain an operator's license and present such evidences of fitness as the Provincial Treasurer may require. Professional chauffeurs must also obtain licenses good for one year. Licenses expire April 1 of each year, and the annual fee for both owners and chauffeurs is \$5.

The speed limit under the new act is six miles per hour for cities and towns and fifteen miles for the open country. When approaching sharp angles, bridges or steep descents, or intersecting highways and crossings, speed must be reduced to four miles per hour. Signals must be blown when approaching angles in the highway.

Virginia's New Law.

RICHMOND, VA., March 26.—On April 13 the Byrd automobile law, passed at the last session of the Virginia Legislature, will go into effect. As one of the provisions of the measure requires that automobilists shall stop and go to the assistance of drivers of horses or other animals that may be frightened at the machine, women who drive their own cars are in a state of nervous apprehension as to what is expected of them when such a situation presents itself. The bill also requires automobiles to be registered.

South Carolina Has a New Law.

COLUMBIA, S. C., March 26.—A new law was enacted by the recent legislature which requires the registration of automobiles and motor vehicles of all descriptions. A fee of one dollar is exacted and county clerks are authorized to issue the certificates to the operators and tags for the machines. Penalties for violation of the statute are fines running from \$20 to \$100, or imprisonment at hard labor for not more than thirty days.

To Tack the N. Y. M. C. Flag to the "Pole."

That Is What Walter Wellman Will Do When His Airship Lands Him on the Frigid Staff.

The New York Motor Club at its smoker, held March 23, at the Hotel Wellington, New York City, entertained Walter Wellman, the exploring newspaper man who is going to try to find the North Pole with the aid of a dirigible balloon and motor sleds. Other noted aeronauts such as Paul Nocquet, Charles Levee, and Mr. House, an optimistic New Englander, were also at the guest table, in company with Augustus Post, the treasurer of the Aero Club of America. R. H. Johnston capably steered the evening's doings.

Reference was made to the discussion at the organization of the New York Motor Club, two years ago, when it was decided, after some debate, to include air navigation as one of the objects of the club's existence. The presence of Mr. Wellman made apparent how rapid had been the progress in the direction of motoring in the air.

To Mr. Wellman was presented a flag of the New York club, which he promised to "tack to the pole" when he found it.

"I am no enthusiast, no hero," said Mr. Wellman, "and I have no desire to reach the North Pole without a return ticket and a chance to use it. My two previous trips into the Arctic zone have made me well acquainted with the conditions and the customary winds. My airship has been designed on a different principle from all preceding ships of this character. It is not built for speed. It is to make from 12 to 15 statute miles an hour, and 5,500 pounds of gasoline will be carried as fuel. This will drive the ship for a distance of 1,760 miles, requiring about 140 hours. The distance from Spitzbergen to the pole is estimated at 1,200 miles, so I will be provided with 50 per cent. more carrying force than is absolutely necessary.

"You perhaps may ask how I am going to get back, as the airship will not carry enough fuel to come entirely home by it. Well, I am now having built in Paris and America two experimental motor sledges. Each will weigh from 210 to 215 pounds. They will be equipped with small engines, and will only carry the two persons operating them.

"One difficulty is in going from a given to a mathematical point, but having arrived at the North Pole we have this advantage—all the winds blow to the south. Sailing with the winds, our ship might be carried to Siberia, and although I have no love for that country, it would mean safety. We might reach Green-

land, or Franz Josef Land, where I left a large stock of supplies on my last trip. Anywhere on land is safety, and with these motor sledges we can reach civilization. If they fail, I shall have to use the Arctic dog sledge.

"I accept the entire responsibility if any mistake occurs. The best French aeronauts and students have agreed that the plan is feasible, but many doubt its success. The final decision to adopt this method was mine, and any blame will attach to no one but myself. No one knows of how much or of how little value the discovery of the north pole will be. One opinion is as good as another. The scientific spirit is to go and find out and discuss it afterward, and that is all that I hope to do."

Accompanying the American will be Gustave Hervé, the experienced French air pilot. The aerostat is being made by Louis Godard. Its total length will be 160 feet, and the largest diameter 62 1-2 feet. From its largest diameter, about one-fourth from the fore end, it terminates sharply to a point, and curves back gradually to an ellipse. The central part of this large balloon will have several layers of strong silk, pure Para rubber, cotton, rubber, cotton and rubber, while the ends will have the same layers, though of rather lighter construction. The keel suspended underneath will have two engines, one of 50 horsepower actuating a propeller in front and capable of giving a speed, it is said, of fifteen miles an hour. The other motor of 25 horsepower is held in reserve and drives a smaller propeller at the rear. The engines can be driven simultaneously or separately.

The total weight of the balloon is 2,800 kilos, made up as follows: balloon, 1,425 kilos; keel, 330 kilos; cords for suspension, ropes, etc., 125 kilos; rudder, 50 kilos; 50-horsepower engine 275 kilos; propeller and gear, 95 kilos; ventilator with motor for keeping the compensating balloon filled, 50 kilos; anchors, etc., 100 kilos; tank and radiators, 25 kilos; 25-horsepower engine with shaft, 200 kilos; propeller with spare shaft, 95 kilos; accessories, 35 kilos.

Besides the explorers and mechanics, water and fuel, and provisions for 75 days, the balloon will carry four motor sledges, a light steel boat, and a guide rope of steel.

TO THE NORTH POLE BY AUTO.

MINNEAPOLIS, March 26.—A special to the New York Times says that Charles E. H. Burch and Frederick R. Burch, Minne-

apolis men, will attempt to reach the North Pole in an ice automobile of their own invention. The vehicle is supplied with all the comforts one might expect to have in a houseboat.

The inventors have engaged in exploration in Alaska more than once, and it was for the purpose of making trips on the trackless wastes of Alaska in quest of mineral wealth that their idea was perfected and a working model was built. After they had the vehicle in working order the idea of a polar exploration suggested itself, and the brothers announced that, while their original plan was not to discover the pole, there was no reason why they could not make the trip if the proper interest was shown in the expedition.

They have the automobile in operation at Lake Calhoun, where it was inspected yesterday by interested residents of Minneapolis. It is built like a large street car and is heated by hot water. The Burch brothers assert that they have selected a route to the pole that is as sure as their means of locomotion is certain. They believe they will be able to obtain ample financial backing for the venture.

TO THE SOUTH POLE BY AUTO.

MIDDLETOWN, N. Y., March 26.—Three automobiles are being constructed by Theodore A. Cook, a brother of Dr. Frederick A. Cook, of Brooklyn, at Calicoon, near here. These are for the use of the 1907 South Pole expedition. The cars will be of 24 horsepower each, and will be a combination of wheels and runners constructed after Mr. Cook's own ideas. The explorers expect to cover ten miles an hour over the ice with these cars, running continuously night and day. The cars will be put into use when a point is reached beyond which navigation is impossible. Fred Cook, a son of the manufacturer, will accompany the expedition as one of the chauffeurs.

COUNT DE LA VAULX IN AMERICA.

Count Henri de la Vaulx, the French aeronaut, is again in this country, having arrived March 24 on *La Savoie*. The Count comes here on the invitation of officials of the Aero Club of America and will participate in various air journeys before his return. The noted Frenchman between January 19, 1904, and December 9, 1905, made fifty-nine ascents, though he was in America for six months of this period.

Plans for a clubhouse, 75 by 65 feet, to be located at the foot of West One Hundred and Twelfth street and Hudson river, are being prepared for the Motor Boat Club of America. The city of New York has granted a frontage of 125 feet, but the new house will be built on made land beyond the present shore line. It is expected the new house will be completed by fall, in time for the annual motor boat carnival.

THE AUTOMOBILE CALENDAR AMERICAN.

Shows.

- Mar. 31-Apr. 7—Baltimore Automobile Show, Baltimore Dealers' Association.
- Mar. 31-Apr. 7—Toronto (Canada) Automobile Show, Toronto Dealers' Association.
- April 4-7—Omaha Automobile Show, Auditorium, Omaha Dealers' Association.
- April 9-14—Canada Automobile and Motor Exhibition, Mutual Rink, Toronto.
- April 18-21—Denver Automobile Show, Coliseum Hall, Denver Auto Show Association.
- April 21-28—Canada Automobile and Motor Exhibition, Arena, Montreal.
- May 24-26—Open Air Show, Empire City Track, New York Trade Association.

Tours.

- June 6....—Orphans' Day, Second Annual Celebration by the New York Motor Club.
- June 18-23—Second Annual Economy Test, New York Motor Club.
- July 23....—Annual A. A. A. Tour for the Glidden Trophy, starting from Buffalo or Cleveland.

Race Meets.

- April 9-12—Pablo Beach, Florida. Spring Meet Jacksonville Automobile and Motor Boat Club.
- April 19....—Boston, Annual Hill Climb, Bay State Automobile Association.
- April 25-27—Atlantic City (N. J.) Automobile Meet.
- May 10....—Wilkes-Barre, Pa., Centennial Jubilee Hill Climb.
- May 30....—Chicago Motorcycle Race Meet, Chicago Motorcycle Club.
- May 30....—Boston, Annual Meet of the Bay State Automobile Association, Readville Track.
- July 4....—Milwaukee Motorcycle Race Meet or Reliability Trial, Milwaukee Motorcycle Club.

FOREIGN.

Shows.

- Mar. 24-31—London, Agricultural Hall, Cordingley & Co.'s Motor Show.
- April 1-17—Budapest Exhibition, Auto Club of Hungary.
- April 15-May 1—Marseilles (France) International Automobile Exhibition.
- April 15-May—Milan (Italy) International Exhibition.
- April 28-May 6—Geneva (Switzerland) International Exhibition.
- Oct. 5-14....—Leipzig (Germany) Exhibition, Krystall Palast.
- Nov. 1-16—Berlin (Germany) Automobile Exhibition.
- Nov. 15-24—London, Olympia Motor Show.
- Nov. 23-Dec. 1—London, Stanley Show, Agricultural Hall.

Tours.

- May 6....—Targa Florio Tour (Sicily), Auto Club of Milan.
- May 12-13—International Light Touring Car Competition, Vienna to Gratz and back, Austrian Automobile Club.
- May 13-14—Tour de France, Motorcycles and voitures.
- May 15-16—Le Coupé d'Or and International Automobile Congress, at Milan, Italy.
- June 5-13—Herkomer Cup Touring and Speed Trials, Munich, Bavaria.

June 11-16—Land's End to John O'Groats, Auto Cycle Club of Great Britain.

June 13-16—Scottish Reliability Trials.

July 29—Aug. 15—Circuit Européen, 3,000 miles, Paris, Milan, Vienna, Berlin, Cologne, Paris.

Race Meets.

- May 27....—Motor Cycle Club of France Championships.
- June 26-27—Le Grand Prix, Sarthe Circuit, France.
- June 29....—International Cup Race for Auto Cycles, Austria.
- Aug. 1-15—Circuit des Ardennes (Belgium).
- Aug. 15-16—Ventoux (France) Automobile Meeting.
- Aug. 14-19—Ostend (Belgium) Meet.
- Aug. 23....—Semmering Hill Climb.
- Sept. 27....—Tourist Trophy Race, Isle of Man, Auto Club of Great Britain.
- Oct. 7....—Chateau Thierry (France) Hill Climb.

Motor Boat Races.

- April 1-15—Monaco (Italy) Motor Boat Races.
- April 17-19—Nice-Toulon-Nice (France) Motor Boat Race.
- May 6....—Suresnes (France) Motor Boat Meet.
- June 28-29—Kiel (Germany) Motor Boat Races.
- July 1....—Maison-Lafitte (France) Motor Boat Races.
- July 8....—Le Coupé Dubonnet (France) Motor Boat Race.
- Aug. 6....—Motor Boat Race on the Rhone (France).
- Aug. 16-18—British International Cup Motor Boat Race.
- Sept. 16....—Juvisy (France) Motor Boat Meeting.

PATENT LITIGATION DECISIONS.

The Association Patents Co., a holding company which is an offshoot of the Association of Licensed Automobile Manufacturers, announces that it has acquired a basic patent on spark plugs in which the sparking points are surrounded by a recess for the purpose of preventing fouling and consequent short-circuiting. The patent is given as No. 612,701, issued to Frank W. Canfield, October 18, 1898. Another patent, issued to Mueller, is said by the Association Patents Co. to cover a plug detachable from the cylinder head, having a non-conductor disk bearing against the seat, and a circuit wire connected with a pole-piece extending through the disk.

Announcement has been made by the Diezemann Shock Absorber Co., of Hoboken, N. J., that the application of the Hartford Suspension Co., of New York, for an injunction restraining Hollander & Tange-man, of New York, from using the Diezemann shock absorber has been denied by Judge Lacombe in the Circuit Court of the Southern District of New York. The application was made pending the trial of a suit brought by the Hartford Suspension Co. against Hollander & Tange-man for selling the Diezemann device and for using the term "shock absorber," the Hartford company claiming that its patents cover every form of rotary vehicle spring retarding device and that the term "shock absorber" is its trade-mark.

Easy for "Mountaineer."

TRINIDAD, COL., March 22.—With the Raton pass, over the mountains of the same name, safely crossed and the good roads of Colorado under wheel instead of the adobe mud of New Mexico, the cruise of the *Reo Mountaineer* toward New York should now be child's play by comparison with the trip through California, through the desert, and across the territories of Arizona and New Mexico. It took us as long to traverse the trails of New Mexico alone as it did to cross the entire continent from New York City to Portland, Ore. following the line of the Union Pacific farther north.

At Trinidad we are attaching a new muffler to the car, as we have been informed that "a muffler that will muffle" is one of the requirements of the state automobile law. We have also fished out our old New York state license and once more attached it to the rear axle, secured a new oil reservoir for our tail light and a new gas generator for the one that we allowed to freeze and burst farther west, but we would go to almost any trouble to meet the requirements of a law made by a state or territory that provides such good roads as we have found since coming over the mountains into Colorado.

J. W. Catron and Frank McKane, the two Santa Fé automobile enthusiasts who set out to accompany us to Denver in their steam runabout, are now riding in the tonneau of the *Mountaineer*. Their machine met with an accident at Watrous and was shipped into Denver with our baggage.

From this point we abandon the old Santa Fé trail, which runs to old Fort Leavenworth, and strike off north directly to Denver. The roads are so good that we even have hopes of making the 220 odd miles between Trinidad and Denver in one day. The run from Denver to New York has been made by a number of automobile enthusiasts and, beyond Missouri and Illinois mud, we anticipate no great hardships.

To-day Fassett and I are changing the tires on our front wheels and replacing the pair put on at Boise City, Idaho, with the original set of Diamonds we discarded in Idaho and sent back to the Akron factory to be recovered. The tires we are taking off are air tight and show very little wear, but they are badly cut in places where they have come in contact with sharp lava rock or bounded over the rough stumps of small trees and left sticking up in the trail in many places through Arizona and New Mexico.

At Raton we were met by a delegation of automobilists, E. C. Sperry having sold several carloads of machines in that out-of-the-way New Mexican town. Besides automobiles, Mr. Sperry sells ice-cream. To freeze his cream he attaches a belt to the rear wheel of his car and over a large pulley on the ice-cream freezer. He then throws in the low-speed clutch, and in fourteen minutes his cream is frozen.

PERCY F. MEGARGEL.

New Jersey's Good Roads Building.

New Jersey's peculiar geographical situation, its proximity to the metropolitan district and unlimited possibilities for development as a residence center, has given the state a prominence that is distinctive, and everything pertaining to the improvement of highways in that commonwealth is of national interest.

Commissioner of Public Roads E. C. Hutchinson has just issued the twelfth annual report of his bureau, which discloses the interesting information that the state has expended a total of \$1,925,444.14 in the twenty counties of the commonwealth in road improvement since the adoption of the state aid law in 1892. The number of miles constructed since that time has been 1,111 and a fraction. As the state furnishes one-third of the total cost the gross amount expended can be readily calculated—\$5,776,332.42. During the year ending October 31, 1905, there were 67.78 miles of road built, at a cost to the state of \$164,648.99.

The commissioner says that the enforcement of the requirements of the new road law passed in 1904, that counties keep roads built by state aid in good repair or have moneys due them withheld has had a good effect. Special articles on road maintenance and prevention of dust are included in the report, which is replete with useful statistics, and supplemented by an official road map of New Jersey, drawn on a scale of five miles to the inch.

Of particular interest to automobilists are some of the recommendations made by the commissioner, who goes on to say:

"The automobile is now a recognized means of conveyance, and as such is entitled to the use of the highways, but there are certain appliances used upon them which are very detrimental to our roads. The damage done to the surface of our macadam and gravel roads by these appliances is so great that the question of a remedy is creating considerable agitation all over the different counties of the state. The temptation to get all the speed possible out of any means of locomotion is almost irresistible; therefore, no one should be allowed to run a machine upon our public highways without first obtaining a license, granted after a proper examination, as the majority of the accidents are caused by incompetent chauffeurs. If the high-speed machines are to be allowed upon our highways, they should be taxed in proportion to the maximum speed of which they are capable. In other words, they should pay for the damage they do, and all money paid into the State Treasury for such licenses should be applied to the maintenance and repair of our roads.

"Dust raised by an automobile, when running at a rate of less than twenty miles an hour, is not any worse than that raised by many wagons, but when this limit is ex-

ceeded the automobile becomes the dust nuisance. Many cures for the dust annoyance have been suggested, as the sprinkling of our roads with crude oil and different solutions of absorbent salts. These will prevent the dust, but are too expensive to be generally used. Our remedy, therefore, would be a strict enforcement of the speed limit, the abolition of armored tires, chain tires, and blowers, and a sprinkling of all of our improved roads early in the morning and late in the evening. This would preserve the roads and would reduce the cost of repairs very materially, at the same time giving us a better, smoother and more dustless surface than we now enjoy. There is no better or cheaper way of preserving our roads than by sprinkling. Water for this purpose can be obtained from neighboring streams, and, in those sections where there are none, from wells driven beside the road. In either case it is better and cheaper to pump the water into a tank, from which it can be drawn into the wagons, thereby saving much time."

Raritan River's New Bridge.

PERTH AMBOY, N. J., March 27.—Frequent announcement has been made that the new bridge over the Raritan river, connecting the place with South Amboy, would be completed by April 1, but such statements are inaccurate. It is thought only unforeseen legal difficulties can prevent the bridge being ready for use within a few months, as the contract for the sixty-foot steel span for the railroad spur probably will be given out this week. There are several phases of the bridge controversy still hanging fire in the courts, and the War Department has not been heard from officially as to its stand in the matter.

Automobile tourists from New York via Staten Island to the north Jersey coast resorts have always been obliged to go by the way of New Brunswick, a waste of considerable mileage, due to the absence of such a bridge as is now under construction. To reach the bridge from the Staten Island Ferry exit, Perth Amboy, the route is straight up Smith street, crossing tracks of N. Y. & L. B. R. R., six blocks, to Goodman street, left one block and then right one half block to bridge approach.

Even the completed bridge will call for a great deal of road building, for the following reasons: From Rahway to Perth Amboy (by which tourists from Newark and North Jersey would approach the bridge), is wretched, from Woodbridge. On the south side of the river the macadam road ends abruptly at Morgan, where the road leads along the beach of Raritan Bay; and it is no "Ormond." With one exception, the other routes leading from South Amboy are ordinary dirt roads, excellent when in condition, but usually muddy or

very dusty, sometimes sandy. The exception is the macadam road, through Sayreville and South river to Hardenberg's (or Tanner's) Corners.

NEW HAMPSHIRE'S PROGRESS.

New Hampshire has adopted a definite policy of highway improvement in keeping with its reputation as the great summer vacation state, and promises to be more than ever attractive to automobilists in the future. The three main highways which the state will build all lead to the White Mountain region. One starts at the seashore and follows the east side of the state through the famous resorts of the Crawford Notch section; one extends up the Merrimack valley, through the Pemigewasset valley and the Franconia Notch to Bretton Woods and Crawford's; the third will follow the Connecticut river along the western boundary. In addition to these main highways there are numerous mountain highways which are "state roads."

Labor Commissioner L. H. Carroll has issued a special report, covering the statistics of the summer business, which shows that the capital invested in summer hotels, boarding-houses, cottages, etc., has increased from \$10,442,352 in 1899 to \$22,285,179 in 1905; during the same period the number of summer visitors has increased from 170,280 to 309,243. The capital invested in summer residences and cottages amounts to \$11,327,879, and during 1905, 28,163 persons resided in such summer homes.

GRAFT BLOCKS ROAD WORK

WILMINGTON, DEL., March 26.—Active work on the construction of about a mile of new macadam road to connect Market street, the main thoroughfare of Wilmington, with the state road, has been delayed by the announcement of an increase of 25 per cent. in the cost of crushed stone. Private contractors had bid for the work at a price of \$9,500, but the Street and Sewer Department of the city notified the levy court that it could do the work cheaper itself; so the court decided to reject the bid and advertise for new ones.

New bids have not been received, but the department has been notified by two parties from whom it has been buying crushed stone of an advance of 25 per cent. in the cost, and it looks now as if the department would have to bid as high as the contractors unless it is able to find enough stone in street excavations, which it is now endeavoring to do. It has a crusher, which will be used if there is sufficient stone and the city gets the contract.

MM. Emile de Beukelaer and Channeckx have completed a tour of inspection of the roads which have been selected as courses for the various events of the week of the Ostend (Belgium) meeting, August 14-19. The town of Ostend and the Kursaal have voted 50,000 francs toward the motor boat part of the meeting.

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Automobile Wear and Tear of the Roads. From New Jersey, in his annual report, comes an assertion by the Commissioner of Public Roads, who, while admitting that the "automobile is now a recognized means of conveyance, and as such is entitled to the use of the highways," charges that "certain appliances used on them are very detrimental to our roads." These are enumerated as "the armored tire, the chain tire and the blower."

The automobile mileage of New Jersey probably exceeds at the present time the total horse mileage over the improved roads of the state; a year hence there will be no comparison between the motor-driven vehicle and the horse.

If the "armored" or "studded" tire does as much harm to a road as is done by the iron shoes of a horse and the narrow iron tire of the wagon which the animal draws, then the opinion of an unconvinced observer is very much astray.

Chains are invaluable when the highways have been deluged with rain, and the country traversed is hilly and circuitous. Unthinking automobilists are prone to utilize chains when this help could be dispensed with, and it would only be fair for this

class to bear in mind the protest of the New Jersey commissioner and to exert themselves to the extent of removing the offending adjunct when good highway is encountered, even though it be necessary to employ chains again during the same run.

"Blowers"—meaning probably both exhaust and fan—are an exaggerated method of injury, but even the automobilist will admit that a heavy touring car traveling at a high rate of speed will raise by suction loose portions of the road.

And it is at this point where the core of the whole subject is reached. If this modern method of travel—bound to be universal—injures the kind of roads which we now have, it is a question of the immediate future to construct a highway that will withstand the harder usage enforced by the coming of the automobile.

Referring to another phase—the apportionment of the cost of building these roads. The automobilist pays his share—and it is a goodly share, too—while the ruralist is a comparatively small contributor, the bulk of state taxation falling on the cities and the large towns. The ruralist is entitled to just as much consideration as any other user of the highway, but just that much and not any more, and because of the brainless use of the motor-driven vehicle by a few, the growing army should not meet with opposition at every turn of the road.



Futile Deductions from Horse Statistics

Attention has been called of late by various newspapers and trade publications to the number of horses and mules bred in the United States each year from 1890 to 1905, and their value. These figures were compiled by the United States Department of Agriculture. Different writers have sought to show by them diametrically opposite tendencies, some pointing out that the number of horses had increased from 14,213,837 in 1890 to 17,057,702 in 1905, and their average value from \$37.50 each in 1899 to \$70.34 in 1905. Others introduced the factor of the increasing human population of the country and showed that the number of horses is actually decreasing in proportion to the population.

Perhaps this proportional decrease accounts in some measure for the increasing price, although this is more likely to be due to the steady rise of prices for all products, whether of farm or factory, during the last five years. But the proportional decrease in the number of horses has not been so great as many might have supposed in view of the predictions that the advent of mechanical transportation would cause the "passing of the horse."

Manifestly it is impossible to base any approximately accurate estimate of the future of the horse upon statistics of the past decade or two. All the influences that have affected the breeding of draft animals heretofore may any day be displaced by

new ones. For example, automobile commercial vehicles are only just beginning to take their part in the transportation of merchandise. Ten years may cause as great a revolution in city trucking as it did in street car service, in which countless thousands of horses have been displaced—how many can never be known, but one has merely to attempt to picture the street car and interurban service of to-day throughout the country carried on with horses to imagine the number that would be required for it.

Similarly, we shall never know how many horses are finally displaced by automobile trucks, delivery wagons, omnibuses and cabs, for there will be no basis for comparison. The number of horses in proportion to population is not a safe basis upon which to make estimates, since the output of human endeavor, with the means at hand, has been multiplied manifold in the last quarter century in proportion to the number of inhabitants in the country. Conceive for a moment of performing the work of the country to-day by the means of even twenty-five years ago.

While there is every reason for believing that another generation will look upon horses in the streets of our cities with as much curiosity as we now gaze upon the very rare team of oxen and our children point with amazement at the surviving horse car in New York, only automobile enthusiasts of the greatest temerity have maintained that the immediate future holds forth promise of a more economical power for farm work than that of horse flesh. Yet, only this week the welcome news comes from Washington that the Ways and Means Committee of the House of Representatives has reported favorably the "free alcohol" bill now before Congress. The unlimited possibilities opened to the farmers by the enactment of a law removing the tax from denatured vegetable alcohol for the mechanical arts are as yet realized by only a very few, but already gas engine and farm implement manufacturers are busily engaged in designing and building machinery for doing all sorts of farm work with the power to be derived from such a fuel. In the end it may prove far cheaper for the farmer to make alcohol from beets to run his machinery and convert his pasture and hay field to more productive purposes than feeding his horse flesh. When that day comes the "passing of the horse" will be near at hand.



SINCE the State of New York gives the Board of Supervisors of Nassau County authority to grant permission for the running of the Vanderbilt Cup race over its roads, and this spectacle supplies the greatest free show ever given to the American public, would it be unreasonable if a regiment or two of State Militia volunteered to guard the course for this battle of the American and European automobile makers?

Discredited Criticism of Ex-Chairman Morrell.

Chairman Thompson Will Invite Mr. Morrell to Serve on the Recently Appointed A. A. A. Racing Board.

As the result of what is looked upon in automobile circles as unfair censure of ex-Chairman Robert Lee Morrell, the newly appointed chairman of the American Automobile Association Racing Board, Jefferson DeMont Thompson, will invite the ex-chairman to serve on the 1906 board.

In recent issues of his weekly paper, Samuel Walter Taylor, one of those recently invited to act on the 1906 Racing Board, criticised in violent manner the Board of the previous year, making particular reference to the energetic chairman of it. One of the headlines used by Mr. Taylor was "To Turn the Grafters Out." Exactly what was meant by Mr. Taylor is considered somewhat vague, for the reason that though Mr. Morrell was mentioned as being a stockholder in the Locomobile Company, and the impression was given that he had favored that concern's entry in the Vanderbilt race, such effort on his part was entirely unnecessary, as the car had qualified in the elimination event beyond any question of doubt. E. R. Thomas, the Buffalo manufacturer, in a telegram to President Farson, had wired in this manner:

"Robert Lee Morrell is said to be a large stockholder in the Locomobile Company. I respectfully urge that no one interested as agent or manufacturer of automobiles be appointed to act on the ruling boards. I am building three racers at a very large expense for the sole purpose of winning the Vanderbilt cup for America, and demand a square deal, which was not given me last time."

Subsequently it was denied that Mr. Morrell was a Locomobile Company stockholder, and S. T. Davis, Jr., the president of that company, makes the positive statement that he is not interested.

Previous to the denial, Mr. Taylor had printed the article on "Sportsmanship being subordinated to commercial interests by the managers of the big automobile races."

Mr. Morrell expressed himself in this vein: "I do not own a single share of stock in the Locomobile Company, and never did. I never have been financially interested in that or any other automobile company. I understand that the editor of the periodical which criticised me is Mr. Thompson's personal appointee on the new Racing Board. I am sorry he did not attempt to learn the facts before making such an unfounded charge against a fellow club member."

Chairman Thompson expressed himself as deeply regretting the criticism of ex-Chairman Morrell, and referring to the statement that Mr. Taylor was his personal appointee, said:

"This is an error. Mr. Taylor was invited to serve on the Board because I thought he would be a valuable member of it, having in mind the speech which he

made at the 1905 Automobile Club of America dinner, when he argued for friendly relations and co-operation of horseman and automobilist. However, I do not agree with him in his criticism of last year's Board, and think his remarks most unwise and indefensible.

"Mr. Morrell was a most efficient chairman, and his conduct of the Vanderbilt race entitled him to great credit. I shall be pleased to invite him to serve on the 1906 Racing Board, and hope that he will find it possible to accept."

It is understood that the members of the 1905 Board who have been invited to serve again this year are much incensed over Mr. Taylor's criticism, and the impression prevails that for his "break" he should tender his resignation to President Farson and Chairman Thompson.

Long Islanders Want Vanderbilt Race.

MINEOLA, L. I., March 26.—A petition which had received the signatures of about 1,500 residents of Nassau county who are in favor of having an automobile race on the public roads of the county this year was presented to-day to the Board of Supervisors. The petition is as follows:

"To the Board of Supervisors:

"We, the undersigned residents and citizens of the county of Nassau, do hereby respectfully petition your board to request the Automobile Association of America to hold its automobile test and race for the year 1906 over the course laid out by your board within the county in the year 1905."

It is rumored that a counter petition will be got up by the People's Protective Association, which was active last year in opposition to the Vanderbilt cup race on the public highways.

Of the three members of the Nassau Board of Supervisors Jones and Willets are in favor of the race, while Seabury is opposed to racing on the highways.

Vanderbilt Cup Race Items.

Up to the present time seventeen American cars are scheduled to participate in the American elimination trial for the Vanderbilt Cup race: Thomas, three; Pope-Toledo, three; Frayer-Miller, three; White, two; Maxwell, two; Royal Tourist, one; Chadwick, one; Queen, one; National, one.

The Vanderbilt Cup Commission will probably make an effort to secure assistance in guarding the course from the state militia.

E. W. Sutphen, through the Automobile Club of Great Britain and Ireland, will enter a 100-horsepower English Daimler in the Vanderbilt Cup race. It will probably be driven by Guv Vaughan.

Open-air Show Assured.

Decisive action was taken by four-fifths of the members of the New York Trade Association, who were represented at the committee meeting held Monday evening, in reference to the open-air show matter which had been under discussion for some time. The show will be held at Empire City track, May 24, 25 and 26, and Frank Eveland, W. M. Haradon and C. Andrade, Jr., constitute the committee of arrangements, with Alfred Reeves as manager. Under the grandstand 6,000 square feet of floor space can be used for exhibits, and tents will provide all the additional space required.

A leading feature of the show will be a balloon race in which all the prominent aeronauts will be invited to participate. As the prevailing winds in this section are inland, the conditions ought to be ideal for a race of this nature.

TORONTO'S SHOWS.

TORONTO, ONT., March 26.—The Canadian show circuit will open next Saturday afternoon, March 31, this being the event conducted by the Local Dealers' Association, with E. M. Wilcox acting as manager. The Hon. William Mortimer Clark, K. C., Lieutenant-Governor of Ontario, will formally open the show. All the members of the Ontario legislature (now in session) have been invited to attend the opening.

The exhibits will be housed in two buildings, automobiles of Canadian, American and European construction being in one building, with the motor boats and accessories in the other.

Following the dealers' exhibition will come the show conducted under the management of R. M. Jaffray, Jr., at the Mutual Rink. The dealers' show will close April 7, and the Rink show will begin April 9 and conclude April 14.

BALTIMORE'S FORTHCOMING SHOW.

BALTIMORE, MD., March 26.—Plans for the automobile show to be held in this city from March 31 to April 7 are progressing rapidly and, according to the management, extremely satisfactorily. It has been announced that a parade of automobiles will immediately precede the opening of the show on the first night.

Progress of Alcohol Bill.

WASHINGTON, D. C., March 26.—Decisive action was taken on the free alcohol matter to-day by a sub-committee of the Ways and Means Committee of the National House of Representatives, which agreed to report a free alcohol bill to the full committee on Wednesday of this week. The bill as outlined by the sub-committee takes off the internal revenue tax from denatured domestic alcohol for technical uses in the mechanical arts, and will go into effect three months after its passage.

The American Automobile Association.

Concerning the National Organization: Why It Deserves the Support of Automobilists, and What It Is Doing and Will Do for the Good of the Pastime.

The American Automobile Association has planned a far-reaching and comprehensive plan for the general good of automobiling and automobilists. In order to make apparent the national character of the organization, this year the Easterners have given way to the Westerners, and into the administrative department stepped John Farson, of the Chicago Automobile Club, as president; William H. Hotchkiss, of the Automobile Club of Buffalo, as first vice-president; Dr. Milbank Johnson, of the Automobile Club of Southern California, as second vice-president; and Sidney S. Gorham, of the Chicago Automobile Club, as secretary. Lewis R. Speare, of the Bay State Automobile Association, is the third vice-president; and George E. Farrington, of the Automobile Club of New Jersey, remains as the treasurer.

Secretary Gorham has entered upon an energetic campaign, and his first appeal to the automobilists of the country is herewith given:

Policy of the A. A. A. Directors.

The American Automobile Association is an organization of owners and users of automobiles, formed to protect and extend the rights and privileges of automobilists.

The declaration of policy adopted by the Directors states its objects to be:

1st. The uniting in one National body the automobile clubs of the country, and through them the individual automobilists.

2d. The promotion and furtherance of all matters of a national character in which automobilists are interested, as follows: (a) legislative matters, (b) good roads, (c) control of racing.

3d. Providing for its members direct benefits as follows: (a) reciprocal club privileges, (b) supplying through its information bureau facts regarding laws, touring routes, maps, racing statistics, etc., (c) a medium for the exchange of ideas and information of value to clubs in furthering their promotion and usefulness, and valuable to individual automobilists.

To Obtain Uniform Law.

The Law Committee, S. S. Gorham as chairman, and made up of one member of each club affiliated with this association, and of members at large in every state, in order that the advice of the best lawyers of the country who have made a special study of the laws pertaining to the use of automobiles may be available, will draft a bill providing for state regulation of the use of automobiles, and the American Automobile Association, through its constituent state associations, clubs, and individual members, will urge its enactment into law by the legislatures of the different states. The advantages of a uniform law providing for the recognition in each state of numbers and licenses issued under the provisions of the laws of other states, and giving to automobilists the rights and privileges to which they are fairly entitled, are universally recognized.

The Law Committee will advise members of the Association, without cost to them, as to their legal rights in respect to actions at law, either civil or criminal, in connection with the use of motor vehicles.

Will Contend for Good Roads.

The Highways Committee, William H. Hotchkiss as chairman, will work for good roads and aid their building in every possible manner. Bills providing for state aid in the building of hard roads will also be drafted and introduced in the various states. By a vigorous campaign a strong public sentiment in favor of state and national aid in good roads building will be aroused. Through the enactment of such laws the gradual and permanent improvement of our country's roads will follow.

Controls Automobile Competition.

The Racing Board, Jefferson DeMont Thompson as chairman, through its control of racing, will maintain the best interests of this branch of the sport and endeavor to eliminate all objectionable features. The sanction fee for members of the A. A. A. is \$10; for non-members, \$50.

What A. A. A. Members Are Entitled To

1. The privileges of all its constituent clubs and will be shown special consideration by foreign automobile clubs and associations.

2. To receive, on application to the national secretary, and without cost, special touring information, including the benefits of a system now being organized to inform automobilists where they can secure, when on tours, good hotel and garage accommodations and the services of competent repairers.

3. Information as to customs formalities and duties, and the driving regulations of foreign countries.

4. Information and advice generally, in connection with automobile matters.

5. A reduced subscription rate for the principal automobile periodicals.

6. Reduced railroad fares to the two big annual automobile shows.

7. A reduction of ten per cent. in the premiums charged for automobile liability insurance, and it is believed that the insurance department will soon be able to offer a corresponding reduction in premiums for fire and theft insurance policies.

8. A substantial reduction in the selling price, to non-members, of the best road maps published.

9. In addition to these personal advantages, automobilists, by becoming members of the Association, support and share in the direction of an organization for the purpose of

(a) Opposing unreasonable laws and ordinances restricting the use of automobiles.

(b) Negotiating with local authorities for the improvement of the roads and the removal of dangerous corners.

(c) Improving the hotel accommodations throughout the country.

(d) Generally undertaking work on behalf of automobilism which can only be discharged by a strong and united body, representative of all automobilists within the United States.

To Encourage State Associations.

It is the policy of the American Automobile Association to encourage the organization of state associations in every state where automobiles are in common use, the membership of these state associations to be made up of automobile clubs and individuals.

How to Join the A. A. A.

If there is no club in your immediate vicinity you are urged to join the state association, if there is one in your home state, and if not, your membership in the A. A. A. is solicited.

Membership in a club affiliated with the A. A. A., directly or through one of its constituent state associations, carries with it membership in the national body. The dues in the A. A. A. for individuals are \$2 per year, the membership fee for clubs is \$10 and the dues are \$1 per year for each member, and upon the organization of a state association, one-half of the moneys received from members in each state is remitted to the treasury of the state association.

With the local club speaking for the individual, the club backed by the state association, and the national organization behind all three, the results are certain to be beneficial and far-reaching.

Address all communications to Sidney S. Gorham, Secretary American Automobile Association, 31 West Forty-second street, New York City.

Ohio Association Organized.

COLUMBUS, O., March 24.—Delegates from leading clubs of the state met here this afternoon and completed the organization of the Ohio State Automobile Association, which will be affiliated with the American Automobile Association. The first steps for its formation were taken at a meeting held in Cleveland several weeks ago, at which arrangements were made to formally launch the organization at to-day's meeting, which was held in the handsome parlors of the Columbus Automobile Club, in the skyscraper of the Columbus Saving and Trust Company.

The purpose of the association is to advance automobile interests in Ohio. The delegates are most optimistic for the future of automobiling here and confident that unification of the clubs of the state will produce very beneficial results.

Officers were elected as follows: President, F. T. Scholes, of Cleveland; vice-presidents, F. E. Avery, of Columbus; Andrew Auble, Jr., of Akron; Walter C. Baker, of Cleveland; Val Duttenhofer, Jr., of Cincinnati; secretary-treasurer, R. H. Cox, of Cincinnati.

President Scholes named several committees, which will begin working at once for the good of the organization.

Among the delegates present were: Cleveland Automobile Club, Messrs. Scholes, Collister, Anderson, Price, Baker, Marvin and Foote; Columbus Automobile Club, Messrs. F. E. Avery, Curtin, Harmer, Repp, Leeds; Automobile Club of Cincinnati, Messrs. Cox and Duttenhofer; Akron Automobile Club, A. Auble, Jr.

An Automobile Parade in Honolulu.

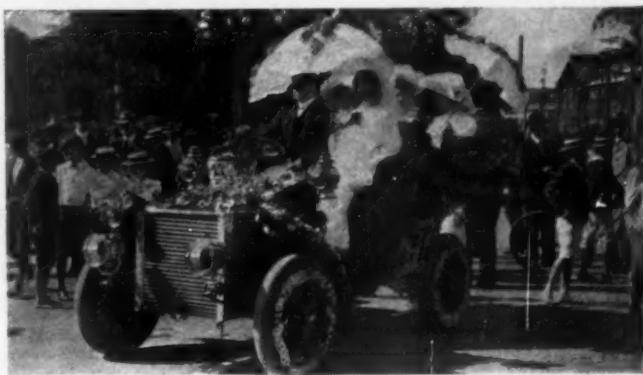
By PACIFIC TRAVELER.

HONOLULU, T. H., March 1.—When home, we who celebrate Washington's birthday by trying to keep warm can hardly realize the way this day is celebrated in the Hawaiian Islands. "The Land of the Heart's Desire," as its residents fondly call their home. It is on this day that the people of Honolulu have their annual floral parade. At first it was confined to decorated carriages and horseback riders; and even in those days it was a sight worth crossing the Pacific to see, but as time has brought to those islands automobile after automobile, the parade has been added to and enlivened by an automobile division; in fact, in the parade held February 22 there were three divisions of automobiles, ten cars in each division; heavy touring cars comprising the first, light touring cars the second

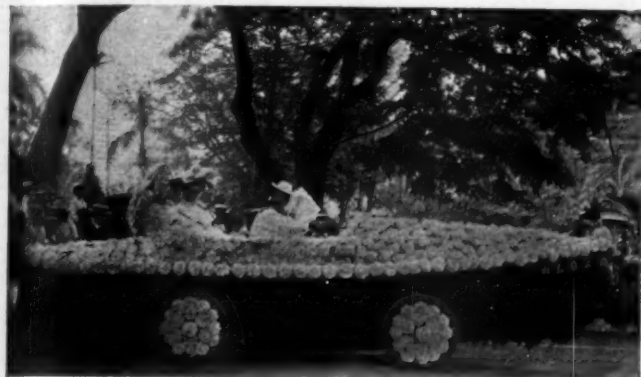
own automobiles and were very conspicuous. One car was finished in the semblance of a native grass hut, in the interior of which Hawaiian boys sang native songs to the accompaniment of banjo and guitar. Even the Japanese, of whom there are many, took part in the parade, and a special prize for uniqueness of design went to one car, owned, decorated and operated by a Japanese.

Automobiling in the islands is progressing rapidly. Much credit is

side the harbor, sometime about 2 o'clock in the morning. I heard the spanker boom come down as we shortened sail, and knew we were almost at our destination. When it became light I was on deck, and I never shall forget the fragrance of that tropical



A WHITE STEAMER PRIZE WINNER.



C. W. CHAPIN'S BOAT-LIKE SECOND PRIZE WINNER.

and runabouts the third. The celebration was not confined to the American residents of Honolulu. The Hawaiians themselves

their number is constantly on the increase.

When I was here before, coming from San Francisco on a schooner, we lay to, out-

due in this respect to the Von Hamm-Young Company, Ltd., the pioneer automobile dealers of the islands and agents for the White car. The Island of Oahu, on which Honolulu is situated, is well adapted to automobiling. Beautiful roads lead in many directions, and a trip around the island is an easy and pleasant matter. Automobiles have

come here to stay, and

atmosphere as the morning breeze bore it out to us over the waters of the harbor. We were ashore at breakfast time, and, after spending the day wandering about, we heard there was to be a concert by the Hawaiian Band that evening at Kapiolani Park. Tired as we were, two of us went to the park, and, when we reached there, stretched ourselves full length under the trees, listening to the music, the soothing Hawaiian music. Through half closed eyes we watched the incandescent electric lights glimmer among the feathery foliage of the trees overhead; watched the moonlight filter down to meet the lower lights; watched the strange features of natives coming and going; and so we spent the warm summer evening, thinking we were in an enchanted world, care-free and living only in the absorbing, luxuriant present.



ALBERT AFONG'S ILIMA

TRIMMED WINTON, ONE OF THE MOST ARTISTIC IN THE PARADE.

Patents

Non-skid Rivets.

No. 814,798.—H. P. Palin, of North Attleboro, Mass.

Rivets having a thin, flat head inside and a conical burr 3 outside. The rivet stem



PALIN METAL NON-SKID RIVETS.

7 is upset and fills a conical hole in the burr, preventing the latter from pulling off when it wears down.

Safety Steering Gear.

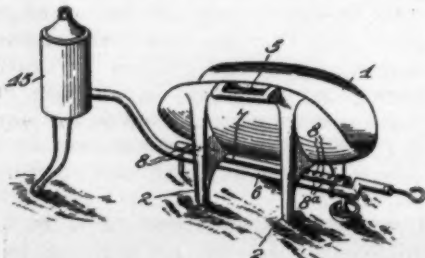
No. 814,586.—E. D. Cahen, of Paris, France.

The safety arrangement in this patent consists of duplicating everything between the steering shaft and the wheels—including the worms, worm wheels, bell-cranks, drag links, and cross links, between the knuckles, so that if one part breaks the duplicate will remain in service.

Vulcanizer.

No. 815,209.—J. M. Padgett, of Topeka, Kan.

A portable vulcanizer designed for roadside application to a tire on the wheel. The body is an aluminum casting 1, resting on legs and provided with a recess for hold-



PADGETT PORTABLE VULCANIZER.

ing a thermometer 5. It is shaped to receive the base of a tire, and is heated by a small burner 6, 7, resembling that of a steam vehicle. The gasoline coming from the can 15 is vaporized in the tube 6 and issues from a nozzle into the mixing tube 7, burning as it issues from slits 8 8. A few lateral slits 8a supply the flames that keep 6 hot for vaporization.

Body Construction.

Nos. 814,823 and 814,824.—H. E. Bradner, of Lansing, Mich.

These patents relate to different methods of using hard sheet fiber as a substitute for wood veneer in body construction. By the first patent the fiber is used without wood support, and is steamed and bent to shape and attached to the body skeleton like thin wood panels. By the second patent a thin sheet of fiber is used as a veneer over several thicknesses of wood glued together with the grain crossing, as in the regular styles of bodies. In either case the merit

of the fiber is stated to be that it does not check, warp, or crack, nor does it buckle or vibrate like sheet metal.

Air-cooling Device.

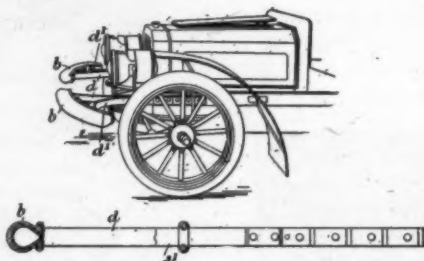
No. 815,257.—C. H. Blomstrom, of Detroit, Mich.

Integral cast flanges of the usual sort, with long threaded rods of small section screwed into holes tapped from top to bottom through the flanges, intersecting them all. The purpose is to increase the effective convecting surface.

Buffer.

No. 814,171.—F. R. Simms, of London, Eng.

A safety buffer to protect the front wheels from shocks. The face of it is an



SIMMS PNEUMATIC BUFFER.

air cushion *b* in the shape of a section of a pneumatic tire, and the framework *d d'* may take the form of a spring of any desired shape.

Speed-changing Mechanism.

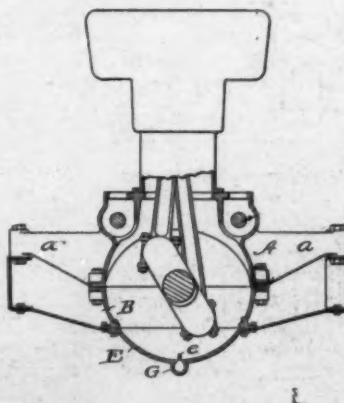
No. 814,133.—H. S. Hele-Shaw, of Liverpool, Eng.

A planetary transmission using Hele-Shaw clutches in place of the usual clutch and friction bands.

Pneumatic Tire.

No. 815,109.—F. Veith, of Höchst-in-Odenwald, Germany.

A tire having a shoe of the form shown, to fit into the rim illustrated, and having the inner tube molded so that when deflated



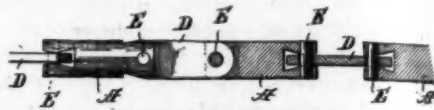
SCHMIDT DIVIDED CRANKCASE DESIGN.

it will assume the collapsed section shown. The purpose is to protect the inner tube from damage by the tire tools when putting on or removing the shoe.

Flexible Shaft.

No. 815,240.—A. P. Warner and C. H. Warner, of Beloit, Wis.

A shaft formed of sections jointed together as shown. The round sections *AA*



WARNER FLEXIBLE SHAFT.

are connected by flat links *DD* at right angles to each other. To increase the flexibility, the pins *EE* are smaller than the holes in the links, thus permitting universal motion of the links on the pins.

Crankcase Design.

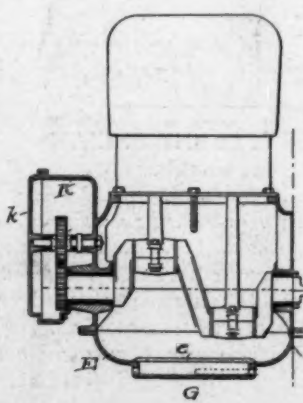
No. 815,045.—C. Schmidt, of Cleveland, Ohio.

Instead of making the whole lower half of the crankcase an oil pan, and supporting the crankshaft independently of it by bolted caps forming the bottom halves of the main bearings, the crankcase is divided horizontally into three portions, *A*, *B* and *E*, of which the first carries the supporting wings *a*, the second supports the crankshaft, and the third forms the oil pan. Preferably a four-cylinder engine has two oil pans *E*,



VIETCH PNEUMATIC TIRE.

one for each pair of cylinders, thus reducing the labor when only one needs to be removed. At the base of each oil pan is a pocket *G*, with a plugged hole at each end, the intention being that this pocket shall collect the sediment from the oil, which shall then be removable by the use of a plunger forced through *G*. Just above is a

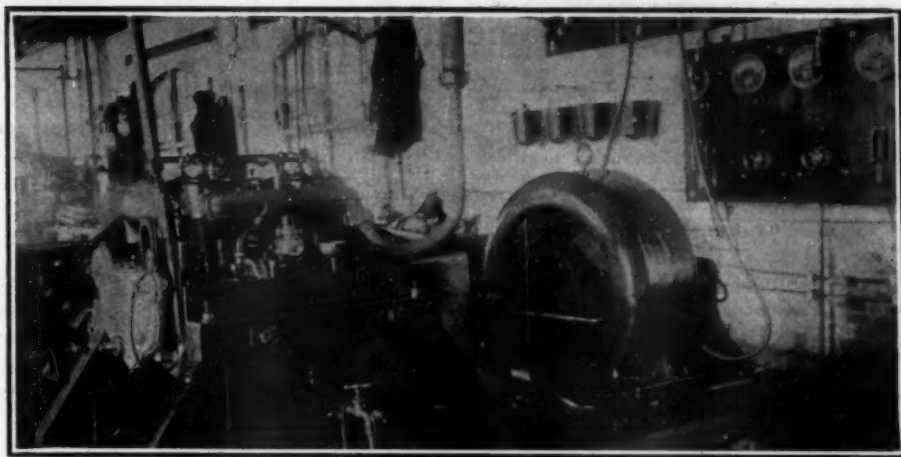


barrier bar *e*, which helps to guide sediment into *G*, and also checks the movement of oil due to the motion of the cranks. The form of the gear housing *K k* is clearly shown.

Testing Locomobile Motors.

An interesting part of the extensive plant of the Locomobile Company of America, at Bridgeport, Conn., is the motor testing department, through which each motor passes before being placed in a car. Each motor is required to drive a dynamo at a speed sufficient to generate a current which represents the expenditure of a predetermined horsepower. The engraving shows a 30-35-horsepower motor mounted on the testing stand and coupled to the dynamo, ready for testing. An ammeter, a volt meter, and the necessary switches are mounted on the switchboard; a double set of instruments is seen, there being a second testing stand just beyond the one shown in the engraving, so that two 30-35-horsepower motors can be tested at one time.

After being assembled, each motor is placed on a stand (not the testing stand) and is flooded with oil and run by belt for some time in order to get the working parts somewhat "limbered up." It is then placed on the testing stand and the regular carbureter, ignition apparatus with low-tension magneto, the circulating pump and other accessories attached. When all is ready, the motor is cranked in the usual way and is allowed to run for some time idle. Then it is engaged with the dynamo by means of a cone clutch of the ordinary type used on the Locomobile cars, and at this point the test proper commences. The volt meter, ammeter and revolution counter are employed and the readings noted as the motor runs, slowly at first, but gradually increasing in speed as the throttle is opened, until maximum power is developed. If a motor fails to develop its full rated power, it is sent back and is not passed until it can come up to the required output; but the manufacturers state that this is rarely necessary, the motors almost invariably testing well above their rated horsepower. The power is calculated by



TESTING PLANT FOR LOCOMOBILE ENGINES, SHOWING DYNAMO AND METERS.

multiplying the amperage and voltage and dividing by the known constant of the dynamo, the resulting figures being the horsepower.

The 15-20-horsepower motors are tested on a similar stand. There are two stands for the larger motors and one for the smaller size. Testing is done by a special crew, composed of men who have nothing to do with the assembling of the motors.

Brennan Vertical Motor.

A four-cylinder vertical motor embodying a number of interesting features has recently been brought out by the Brennan Mfg. Co., of Syracuse, N. Y., a concern that has for a long time made a specialty of horizontal motors. The new four-cylinder motor is made in five sizes, 20, 28, 32, 45 and 80 horsepower, all built on the same lines and differing only in point of size.

Generally speaking, the engine is of the familiar four-cylinder vertical water-cooled type, with individual cylinders, integral heads and water jackets and the valves mechanically operated. The valve arrange-

ment differs somewhat from the usual type.

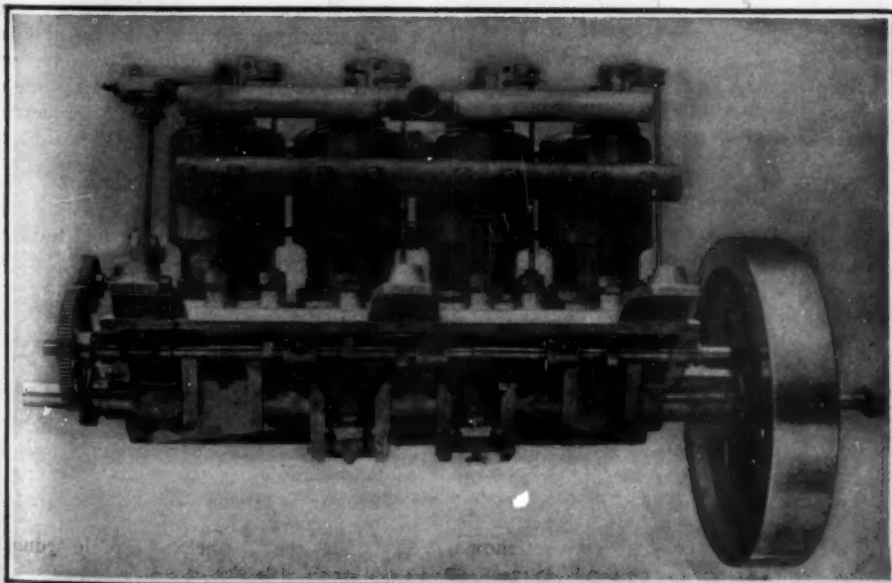
The exhaust valves are at the sides of the cylinders and the inlet valves are on top, opening through the cylinder heads, being operated by rocker arms which, in turn, are moved by long push-rods extending upward from the crankcase. The camshaft runs in five bearings inside the crankcase and the two cams for each cylinder are made integral with a sleeve which is placed on the camshaft and secured in position. Thus there is no chance for the cams to shift with relation to each other.

The crankcase differs from the usual form in being divided diagonally at an angle of forty degrees. When the lower half, which, as usual, serves for an oil chamber, is removed, the crankshaft, camshaft and big end bearings are easily reached for adjustment or inspection, remaining attached to the stationary upper half of the case. The timer is mounted on a vertical shaft at the front end of the motor, and is driven by bevel gears from the camshaft, these gears being in the crankcase, where they are protected from dust and accidental damage and at the same time are well lubricated by splash.

The crankshaft has five bearings and is made, the manufacturers state, from a solid billet of 40-point carbon steel, 3 1-2 per cent. nickel; the flywheel is bolted to a flange formed integral with the shaft. Connecting rods are of forged steel of I-beam section and the bearings at each end are of bronze.

Sliding gear transmissions are made by the Brennan Co. in various sizes to suit these motors, the supporting arms being machined so that when mounted on a sub-frame the transmission will be exactly in line with the engine. The gears are of 1-inch face and 6 pitch and are hardened in oil. Drive is direct on the high speed, when there are no gears in operation.

Automobile railway cars have been adopted by the state of Bavaria for use in secondary lines, and, although these have been in use only since February 1, they have already proved their efficiency.



BRENNAN VERTICAL FOUR-CYLINDER ENGINE, MADE IN SIZES FROM 20 TO 80 HORSEPOWER.

Automobile Companies Recently Incorporated.

Merchants' Garage Company, Wawarsing, N. Y.; capital stock, \$50,000. Directors, P. S. Hill, F. M. Van Wageningen and C. H. Clark, New York.

National Lubricant Company, New York City; capital stock, \$100,000. Directors, Edward Moroney, J. J. Klein, Brooklyn, and W. C. Rosenberg, New York.

Aeronaut Publishing Company, New York City; capital stock, \$100,000. Directors, George Bennett, A. C. Camp, New York City, and H. O. Bingham, Oradell, N. J.

White Motor Company, Camden, N. J.; capital stock, \$150,000. Incorporators, James W. White, Charles F. Woodhull and Charles S. King.

Goodyear Rubber Tire Company of New York; capital, \$1,000. Directors, K. B. Harwood, L. L. Lewis and P. W. Williamson, New York.

Automobile Station of San Antonio (Texas); capital stock, \$1,000. Incorporators, A. E. Staacke, J. W. Collins and E. W. Heusinger.

Wisconsin Auto Transit Company, Milwaukee; capital stock, \$15,000. Incorporators, William C. Sieker, Kenneth E. Healy and Ernest Von Briesen.

August Schubert Gear Company, Oneida, N. Y.; capital stock, \$25,000. Directors, August Schubert, J. O. Schubert and S. F. White, Oneida.

Toledo Auto Touring Company, Toledo, O.; capital stock, \$15,000. Incorporators, Frank J. Van Loo, James Sheehan, U. G. Denman, Carl A. Hudson and Louis E. Krieger.

Rhode Island Machine Company, Providence, R. I.; capital stock, \$20,000; to manufacture automobile engines, gears and appliances. Organizers, Walter M. Jordan, Edwin G. Pinkham and Clayton Harris, Providence.

King Manufacturing and Garage Company, Springfield, Ohio; capital stock, \$20,000, of which \$500 is in 8 per cent. preferred stock.

Mora Motor Car Company of Newark, N. Y.; capital stock, \$150,000. Directors, Samuel H. Mora and William Freeman, of Rochester, William H. Birdsell, of Newark, and George S. Whitney, of Akron, O.

Chemical Auto Co. of Cleveland (Ohio); capital, \$25,000. Incorporators, D. E. Marpass, E. G. Whitten, A. F. Neitt, J. M. Gee and Elijah Bates.

Automobile Exchange, Chicago; capital, \$25,000. Incorporators, Frank Schoenfeld, Milton L. Thackberry and Emil F. Link.

Illinois Motor Roadway Co., Centralia, Ill.; capital, \$150,000; to maintain an automobile roadway. Incorporators, L. A. Johnson, W. Rollin Smith and F. B. Miller.

Snutsel Auto Supply Company, New York; capital \$5,000. Directors: H. L. Snutsel, J. C. Hoffman, Rudolph Weinacht.

Automobile Maintenance Company of America, New York; to manufacture automobiles, etc.; capital \$200,000. Incorporators: Frank Van Orden, William Wieck, Joseph M. Ayer.

Powell Muffler & Timer Company, Utica, N. Y.; to manufacture mufflers, timers, and cut-out valves for automobiles, marine and stationary engines; capital \$5,100. Incorporators: Wm. S. Foster, Wm. B. Foster, John J. Radell, George A. Bowman, Herbert S. Powell.

Racine Boat Manufacturing Company, New York; to manufacture motors, engines, boilers, boats, etc.; capital \$5,000. Incorporators: Oscar Grieff, John Krauch, Walter Gregg, J. Harvey McCracken, Walter J. Reynolds.

Eagle Automobile Company, Rahway, N. J.; capital \$60,000. Incorporators: Frank G. Van Dewater and A. Grobby Spencer.

Mutual Auto Accessories Company of America, New York; capital \$10,000. Directors: T. B. Nisbet, S. A. Houck, F. J. Wallace.

Manly Drive Company, Jersey City, N. J.; capital \$200,000. Incorporators: A. H. Overman, T. M. Roulette, F. J. Lockman. The company is to purchase automobile letters patent.

Kirchdorfer Automobile Company, Louisville, Ky.; capital \$20,000. Incorporators: J. C. Kirchdorfer, Edward Kimmel, F. S. Clark.

Woodill Auto Company, Los Angeles, Cal.; capital, \$25,000. Directors: Gilbert, A. G., H. B. and A. L. Woodill and Arthur Wright.

American Gasoline Motor Company, Baldwinsville, N. Y.; manufacture gasoline motors, boats, etc.; capital, \$20,000. Incorporators: D. Sweet, H. Hendrickson, W. A. Hendrickson, J. E. Carthart, W. B. Harris.

Motor Vehicle Company, Buffalo, N. Y.; capital, \$20,000; to make and sell motor vehicles. Incorporators: James McNaughton, Louis DuBrooy and M. D. Ashford.

Stoddard-Dayton Auto Company, Chicago; capital, \$5,000; garage. Incorporators: W. E. Harvey, H. L. Babcock, A. S. Joslin.

The Auto Shop Company, Cleveland, O.; capital, \$50,000. Incorporators: C. F. Schroeder, I. B. Sperry, W. C. Schroeder, M. W. Lusk, A. L. Maurer.

St. Anne Kerosene Motor Company, St. Anne, Ill.; capital, \$100,000; manufacturing motors. Incorporators: B. H. Pomeroy, A. Sutton, W. A. Quertim.

Hyde Park Garage, Chicago; capital, \$2,500; storage and repairing. Incorporators: T. J. Holmes, G. A. McWhinney, C. E. Moore.

Downtown Garage and Automobile Repair Company, New York; capital, \$10,000.

Directors: E. R. Geddes, F. M. Raynor, Alva Collins.

Endurance Motor Car Company, New York; capital, \$35,000. Directors: Harold Mabie, H. W. Johns, A. Parker Smith.

W. J. Duane & Co., New York; to manufacture motors; capital, \$5,000. Directors: W. J. Duane, F. A. Phillips, A. Y. Pringle.

New York Motor Truck Company, New York; capital, \$85,000. Directors: N. W. Schlater, J. W. Deane, William Donover.

Auto Livery & Sales Co., Cleveland, O.; capital, \$25,000. Incorporators: W. H. Marlott, H. H. Carr, J. E. Hull, Christian Gill and Chas. E. Carpenter.

Automobile Maintenance Co., Laporte, Ind.; capital, \$5,000. Incorporators: John Wolf, Alex E. Lindgren and Martin Weber.

ELASTIC WHEEL FOR SOLID TIRE.

DAYTON, O., March 26.—C. C. Wilson, of this city, has been granted a patent for an improved automobile wheel, upon which a solid tire may be used, it is claimed, with the same satisfaction as a pneumatic tire. The rim of the wheel on which the tire is supported is made of a series of hinged segments pivoted to a series of spokes which set against springs in the hub and afford a resilient and elastic rim. The new tire will do away with punctures and blow-outs. Mr. Wilson has been experimenting for a year.

FARM IMPLEMENTS AND AUTOS.

AURORA, ILL., March 26.—Gen. Andrew Welch, one of the veteran agricultural implement dealers of the Fox river valley, has taken the agency for two automobiles, the Cadillac and the Studebaker.

There is considerable significance in the fact. General Welch likes sporting events and always when there is any kind of a race or contest in the valley he is at the head of it.

It is almost certain that he will promote some sort of competition to show the great and increasing interest in automobiles, and his influence is sure to counteract some of the prejudice that the farming fraternity have against the power vehicle.

MAKING THE ELDREDGE.

BELVIDERE, ILL., March 26.—The National Sewing Machine Company, of this place, is making an automobile on which there has been no change of any kind in three years. The machine is of the runabout type and weighs 1,200 pounds. The company has distributed 300 of them to different parts of the country, last week shipping two carloads to Buffalo. Fifty machines will be made this year.

This car is known as the Eldredge, is a two-cylinder, two-cycle, 10-horsepower. Its transmission is of the sliding gear mechanism, has three speeds forward and reverse. One of the Eldredges now in the shop has traveled over 20,000 miles.

GARAGE CHARGES INCREASING.

At its next meeting the New York Automobile Trade Association, embracing about forty of the leading dealers in the metropolis, will discuss and act upon the question of increasing the charges for storing and cleaning cars. It is thought that the rates will be increased 10 or 15 per cent. The present minimum rates, as fixed by the Association, are as follows:

Runabouts, \$20; for small tonneau cars, \$22.50; for ordinary touring cars, \$25; for large touring cars, \$27.50, and for limousine or closed cars, \$30. These prices include storage, washing, and polishing of the car. Gasoline and all repairs are extra.

Some of the biggest dealers, who have erected costly garages on Broadway, have already found it necessary to raise these rates independently of the action of other agents, owing to the heavy cost of maintenance of their establishments.

"Storage rates would probably be gradually advanced this season," said the manager of one garage, "without the action of the Trade Association. Apart from the heavy expenses that the occupants of the new buildings have to meet, good garages are scarce, and good men, who are careful of a car, are hard to find. It seems a simple matter to wash and polish a car, but it is really a skillful piece of work. With our large cars, it takes a man fully three hours to wash the car, rub it dry, and then go over it with a chamols. If the work is poorly done, the varnish will soon crack and the high polish will lose its luster. Good washers get from \$14 to \$16 a week, and if a car is used every day and needs three hours of attention, that takes off quite a slice of the profits in storing a car at \$25 a month."

AUCTION SALE IN INDIANAPOLIS.

Indianapolis, March 19.—The Indiana Automobile Company introduced an innovation, so far as Indianapolis is concerned, last week, in the way of an automobile auction sale. Although little more than an experiment, it was successful. The company had in stock half a dozen second-hand electric vehicles that had been traded in on 1906 models of the various cars for which the company is agent. To get rid of them quickly, Manager S. W. Elston decided to auction them off.

Attracted by the novelty, probably 100 persons gathered in the garage, and before the afternoon was over, people who had not before thought of owning an automobile were the owners of electric cars. Bidding was lively but prices for the most part were low. One car went under the hammer for \$110, while another sold for \$300, the highest price realized. The average price for which the cars sold was about \$250.

Other concerns that have their garages crowded with second-hand cars for which they have no use, will probably follow the example of the Indiana company.

KANSAS CITY TRADE EXCELLENT.

Kansas City, Mo., March 26.—Trade is excellent. Among the early purchasers of Ford runabouts are a number of men who have large cars for pleasure but want small ones to use in a business way. This alone shows the development of the city in an automobile way, for the possession of more than one car was very rare even last year. This year, however, it promises to be no unusual thing.

One of the runabout purchasers is the Kansas City Gas Company, which controls both natural and manufactured gas in Kansas City. The car is to be given a thorough trial by the company's inspectors, with the probability that more will be put

into service if the first proves satisfactory. In this the gas company is following the lead of the electric light company, which has for some time been using a Kansas City car for runs in cases of accident to electric light wires. The street railway company still use horse-drawn wagons because of the heavy equipment required by the wrecking crew. Other business concerns are said to be ready to be convinced as to the merits of the runabout for their city salesmen and the like.

One of the most interesting performances of large cars here is that of the Pierce, owned by Mrs. D'Estaing Dickerson. It was purchased last June and its owner has made it a point to cover 1,000 miles each month. The record was maintained up to the end of February, without the car ever going in to the repair shop or having any other attention than that of the chauffeur. Replacements consisted of one pair of foot brake shoes and six tires, although the car had been driven 8,000 miles up to March 1. Mrs. Dickerson also owns a Clement limousine, which was, at the time of its purchase, the most expensive car in the city.

THE QUAKER CITY TRADE.

Philadelphia, March 26.—The latest addition to the rapidly-growing local garage list is the Chestnut Hill garage, lately opened under the management of A. Allan, on Highland avenue, Chestnut Hill. Besides carrying on a general automobile hiring, repairing and storing business, Mr. Allan has secured the Germantown and Chestnut Hill agency for the Cadillac, Autocar and Marmon cars.

The Colonial Auto Company, at Fifteenth and Oxford streets, is greatly enlarging its new garage, which has already proved quite inadequate to take care of the rapidly-growing business.

The local home of the Cleveland and Jackson cars, the garage and salesrooms of the Diamond Motor Car Company, on Broad street above Diamond, is undergoing a number of alterations, among which is the installation of a large charging plant for electric vehicles.

GARAGE WIPED OUT BY FIRE.

Rochester, N. Y., March 26.—Fire wiped out the garage of the Thompson-Schoeff Company on Plymouth avenue, this city, last week, causing a loss of \$75,000. The entire building, in which there were thirty or more automobiles stored at the time, was completely gutted, and all but six of the machines were destroyed, as was also a large stock of carriages, sleighs, harness, etc., that was stored in the structure. The building was well insured, and the contents partly so. Major Francis V. Schoeffel, the head of the firm, says that preparations were in progress for the opening of the spring business when the fire occurred, and there were many absolutely new cars in the building, worth from \$1,500 to \$4,000 each. The origin of the fire is unknown.

CHICAGO DEALERS ELECT OFFICERS.

Chicago, March 26.—The annual meeting of the Chicago Automobile Dealers' Association was held at the New Southern hotel last week and officers were elected for the coming year as follows:

President, Ralph Temple; vice-president, Orlando F. Weber; secretary, James Levy; treasurer, Joseph Gunther; directors, the officers, and H. Paulman, Fred Pardee, and Walter L. Githens.

This organization was formed last winter for the purpose of promoting the interests of the dealers in Chicago.

PITTSBURG DEALERS ORGANIZE.

Pittsburg, March 26.—An important step in automobile history in Pittsburg is the organization of the automobile dealers into an association to promote their mutual interests. It will be known as the Association of Automobile Dealers of Pittsburg, and will be operative April 1. Officers have been elected as follows: President, W. N. Murray, of the Standard Automobile Company; vice-president, W. A. Richwine, of the Hilland Automobile Company; secretary and treasurer, Arthur L. Banker, of Banker Brothers.

The dealers, in forming their association, have fixed a uniform rate for garage storage, as follows: \$5 a week for runabouts, \$6 a week for touring cars, and \$7 a week for cars with limousine bodies. The new association will also protect the dealers' interests against manufacturers, who have recently been quite arbitrary in their demands, such as requiring a large deposit in October for the next year's deliveries, and fixing the number of cars which a dealer must take. Uniformity in price of supplies will also be fixed by the new association.

Among the firms enrolled already are the Banker Brothers Company, Standard Automobile Company, Keystone Automobile Company, East Liberty Automobile Company, Hilland Automobile Company, Winton Motor Car Company, and Atlas Automobile Company.

When the garages now being erected are completed Pittsburg will have storage room for many more cars than are owned here. The new garage of the Atlas company will hold 500 cars. The Fort Pitt Automobile Company can store 150 cars, the Hilland 300, the Standard 100, and Banker Brothers Company 100.

LEAR TO MOVE TO ZANESVILLE.

Columbus, O., March 26.—In consideration of a bonus of \$100,000, most of which is cash, the Oscar Lear Automobile Company, of this city, has accepted a proposition to remove its plant to Zanesville, this state, 60 miles southeast from here, and engage in the business on a larger scale. The city has agreed to furnish the company a site of ten acres of fine manufacturing land, and in addition buy bonds to be issued by the company.

President Lear says the company plans to move in the fall, or by the first of the year. Work on the new buildings will start as soon as the weather permits. The present capital stock of \$30,000 will be increased to \$150,000. The company now employs in the neighborhood of 100 men and will have to double that number when the new plant is completed. Last year nearly 100 machines were turned out, and this year between 150 and 200 will be made. The entire output for the year has been contracted for. The company will soon begin making a commercial vehicle in addition to its line of Frayer-Miller cars, which will be equipped with the well-known air-cooling device that is characteristic of the factory's productions.

The Columbus Buggy Company, which last year entered into the manufacture of electric vehicles, expects to turn out 200 machines this year—more than double last year's output.

Flourishing is the term to use in describing the condition of the trade in Columbus, and it promises to become a leading industry of the Buckeye state capital. Its progress the past two years is a sufficient augury of this.

The Keystone Automobile Company has about completed its new offices and show rooms in its East End garage which will be one of the finest in the city of Pittsburg.

News and Trade Miscellany.

The Wayne garage, at 33 Grant square, Brooklyn, recently established, is one of the busiest of the Brooklyn agencies.

Mrs. Joan Newton Cuneo, who drove in the Glidden tour and has been seen on several racetracks, has purchased a Maxwell Speedster, which she will in future drive on private tours and in beach and track races. She will enter her car in the 1906 Glidden tour.

The Auto Supply Co. has opened a branch at 2208 Broadway, between Seventy-eighth and Seventy-ninth streets. The main store at Broadway and Fifty-first street will be continued, the branch being necessitated by the growth of the firm's business in the uptown section.

The low speed of the Sunset two-cycle car was given as 2 1-2 miles an hour in the description of that machine published in our issue for March 8. Writing from the office in San Francisco, Manager D. Libby, Jr., states that this should have read fourteen miles an hour.

Roy D. Chapin, the former sales manager of the Olds Motor Works, is at the present time touring in California. Upon his return to Detroit it is understood that he will go into the manufacture of automobiles, and associated with him will be Mr. Coffin, who was the head designer of the Olds company.

The Cadillac Company, of New York, has removed from Thirty-eighth street, near Broadway, where it has been located for the last three years, to its new building at Broadway and Sixty-eighth street. The building has four floors, affording 36,000 square feet of floor space. The basement will be reserved for Cadillac delivery wagons.

Charles E. Miller, the well-known dealer in automobile supplies, has opened three new stores recently; one in New York City, at 924 Eighth avenue, within a short distance of the new clubhouse of the Automobile Club of America, now being erected; one in Detroit, Mich., at 227-229 Jefferson avenue, and one in Buffalo at 824 Main street.

Having made arrangements to handle the Mitchell pleasure cars in addition to the Mitchell trucks and delivery wagons, the Mitchell Commercial Vehicle Company has removed from the Auto Arcade, Forty-ninth street and Broadway, to 121 West Thirty-first street, and Mitchell interests in New York City are now centered under one roof.

Joy Bros., of St. Paul, Minn., have placed orders for four large gasoline trucks of the Packard type for use in St. Paul. They have also placed an order for a 20-passenger sight-seeing bus, to be used by the St. Paul park board for Como Park. It is expected in the near future that the Commercial Club of St. Paul will establish a sight-seeing service.

In describing the Mora 24-horsepower car in THE AUTOMOBILE for March 22 the address of the company manufacturing the machine was omitted, through a regrettable error. The Mora car is built by the Mora Motor Car Co., whose offices are at 318 Livingston Building, Rochester, N. Y. The car has been styled the Mora Roadster by the builders.

L. M. Dieterich, whose name is familiar to readers of THE AUTOMOBILE as a valued contributor on technical subjects, has accepted the position of chief engineer and

factory manager with the Aerocar Company, of Detroit. This company builds the air-cooled Aerocar. Mr. Dieterich has made a special study of air cooling for automobile motors and will give the company the benefit of his investigations.

Fred H. Bogart, who has been identified with the Corbin Motor Vehicle Corporation, New Britain, Conn., since its inception, as mechanical engineer, severs his connection with that house on April 1, to head a new automobile parts manufacturing concern which is being organized at Hartford, Conn. Mr. Bogart will continue, however, to act in an advisory capacity for the Corbin plant.

The Automobile Cover and Top Mfg. Co., Inc., of New York, is moving into larger quarters at 154 East Fifty-seventh street, New York, where it will have the use of about 20,000 square feet of floor space. Departments will be opened for body building, painting, and upholstering. Messrs. Fichling and Spinning have recently purchased the interests of Percy Owen and Robert E. Fulton in the company.

The National Automobile Company, 205 East Eighty-sixth street, New York, has been placed in the hands of Robert A. Inch as receiver in bankruptcy by Judge Adams, of the United States Circuit Court, upon application by the Columbia Lubricants Company and others. It is stated that the sheriff is in possession of the place. The assets amount to about \$5,000, and there are a number of cars in storage belonging to other persons.

The Rainier Company has found a location for its Philadelphia branch, having just taken possession of the premises at 236 North Broad street, formerly occupied by the La Roche Automobile Company. This office will be under the management of A. J. Picard, well known as a starter in various race meets, and who achieved a considerable reputation as a driver several years ago in the first 1,000-mile non-stop run between New York and Boston.

The Knox Motor Truck Company, of Springfield, Mass., is now breaking ground for a large addition to its present works. A two-story brick building 200 by 50 feet, with basement, will be erected adjoining the present plant. Two models of trucks will be built, one for the hauling of heavy goods, the other a sight-seeing car carrying fifteen to twenty-five passengers. Walter Morse, formerly president of the Second National Bank, of Springfield, has been appointed president of the Knox Motor Truck Co., to succeed C. J. Wetsel. The capital stock has been increased from \$150,000 to \$250,000.

A new brick building, 47x200 feet, is now being erected by the Locomobile Company as an addition to the factory at Bridgeport, Conn. In this building the carpenter shop, pattern room, department of polishing, plating and buffing, and sheet metal department will be located. A new drop hammer has been installed at the works, thus doubling the facilities in that department. Up to the present time every Locomobile shipped this year has been delivered on time.

In order to ascertain the actual strength of its automobile jacks, the Covert Mfg. Co., of West Troy, N. Y., had crucial tests made recently by Prof. T. R. Lawson, engineer in charge of tests at the testing laboratory of the Rensselaer Polytechnic

Institute of the city of Troy, N. Y. The result was far beyond anticipations. The No. 1 jack, weighing only 6 pounds, and the No. 2 jack, weighing only 8 pounds, withstood each a pressure of over 20,000 pounds, and the No. 3 jack, weighing but 12 pounds, withstood a pressure of over 30,000 pounds.

Automobile bodies of every description will be produced by the Bridgeport Vehicle Company, a corporation recently organized with a capital stock of \$50,000 at Bridgeport, Conn. A building containing 30,000 square feet of floor space, fully equipped with up-to-date machinery, has been leased, and the company is prepared to fill orders. The officials of the corporation are: H. D. Miller, president and treasurer; H. F. Brandes, vice-president; Geo. C. Miller, secretary; A. W. Knapp, superintendent.

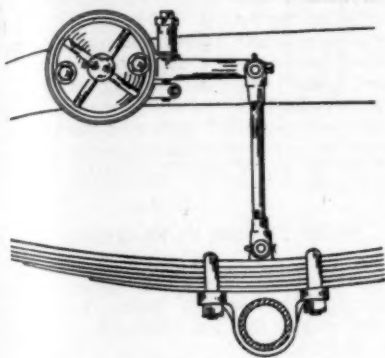
Word has just been received of the winning by an American automobile of the biggest track race ever held in Australia, with the distinction of being the first American car to win any speed event there. This race was for the J. R. Crooke cup, valued at \$500, the most valuable prize ever offered for an automobile race in the Southern Hemisphere. The race was a three-mile handicap, and the Pope-Hartford ran away with the event, this 10-horsepower car making faster time than most of the 16-horsepower cars entered. The Continental Tire Company presented the winner with a gold medal.

C. A. Coey, Chicago agent for the Thomas, has just moved into his new store and garage. The garage proper is considered as complete as it is possible for one to be. The huge room has a concrete floor, which slopes toward two channels running to the rear of the building. All water used in washing the machines and drippings from the cars run over the concrete floor to these channels and are carried away. Each car stored in the place is kept in a separate compartment, the keys of which are held by the man in charge of the garage and the driver of the car. Every time the car is taken from the place a registration is made of the fact, and the time of its return is also noted down. A record of this is given to the owner at whatever intervals he wishes. The Coey garage is dry and well lighted, almost the entire roof being of glass.

The Trader Handbook and Diary, published by the Cycle Trade Publishing Company, 21 Wilson street, London, England, is a unique work and one that is of great convenience to the persons in the trade. It is, of course, intended for use in Great Britain and consequently much of the information contained in it is of no practical value to residents of foreign countries; but it is quite the most convenient book of the sort published. The diary portion of the book is ruled for three days to a page and interleaved with blotting paper. The page measures about 8 by 12 inches. In addition there are ruled pages for insurance records, sales or hire of machines, rentals, repairs, identification marks, and index to customers. The work is published in two separate editions, one for manufacturers and the other for retailers. The manufacturers edition contains a list of dealers in England, Scotland and Ireland that would be very valuable to any American manufacturer desiring to circularize the trade and it also contains a telegraphic code adapted to the requirements of the cycle and automobile trade. This edition costs twenty shillings and sixpence. Firms engaged in trade with England should find the work especially useful.

INFORMATION FOR BUYERS.

SHOCK ABSORBER.—The Victory shock absorber illustrated herewith is made by the Hill Motor Car Co., of Haverhill, Mass. The construction is such that the device offers four times as much resistance to the



VICTORY SHOCK ABSORBER ATTACHED.

recoil of the car spring as it does to the compression, making the rebound slow, with the result that the car rides easily on rough roads. Once fitted to a car the Victory absorber requires no further adjustment.

AUTO TRUNKS.—Several styles of trunks made especially for side-entrance touring cars are illustrated by halftones from photographs in a little catalogue issued by Sage's Trunk Depot, Summer and Kingston streets, Boston, Mass. Among them are special trunks made especially for Pierce Arrow, Mercedes, Packard, Darracq, White, Peerless, Winton, Reo, and Cadillac cars. They are made to fit the cars and to be carried on a rack at the rear or taken off and used in traveling. They are made of patent leather on a steel frame, hand-stitched and riveted, and are guaranteed to be dust and waterproof.

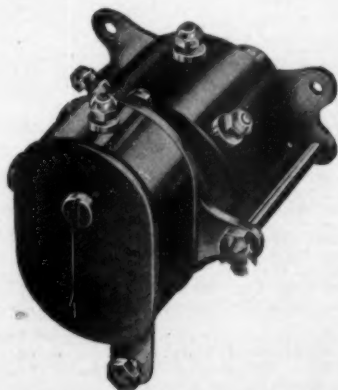
AUTO TOPS.—Cape tops, canopy tops, Victoria tops, limousine bodies, and various fittings for bodies are some of the specialties made by the Teel Mfg. Co., Inc., of Medford, Mass. The Cape tops are all custom made and fitted to the car; they are light and can be put on and taken off with little labor. Clumsy lines are avoided. Various coverings are used, such as khaki, whipcord, leather, imitation leather, and pantasote. The company makes its own cloths. With each top is a complete equipment of curtains and boots for protection against wind, rain, and dust. A specialty which the company is offering for this season is the Teel rolling front, which has a window of celluloid and standards of brass. When in use this front is strong and affords protection to the driver from wind and rain, and when not in use it rolls down to the top of the dash and the standards fold down on top of it. The Teel line includes, in addition to the foregoing, a line of trunk racks, trunks, straps, tire irons, tire covers, sprag drops, and metal boxes for tools, luggage, and ice.

PUNCTURE-PROOF TIRE.—A non-puncturable pneumatic tire is being exploited under the name Elder by the patentee, James M. Elder, of Indianapolis. This comprises a single-tube air chamber strengthened by two or three plies of fabric and resting on a steel rim between two concave rolled steel bands that conform to the shape of the air chamber and cover about one-third of the tread. These steel bands are screwed or bolted to the sides of the felly at their inner edges and have their peripheries

folded back in such a way as to form a retaining channel for a solid rubber tread which fits over and rests upon the periphery of the air tube. This solid tread is very thick and prevents any injury to the air tube underneath, while the steel bands protect the sides of the tube against rim cutting or other damage. The solid tread has endless retaining wires embedded in its edges and is made slightly smaller in internal diameter than the tread of the air chamber, so that when the latter is inflated the solid tread will not creep.

FUEL REGISTERING PUMP.—The Boyer, Radford & Gordon Tank & Pump Co., of Detroit, Mich., has produced a novel gasoline pump that can be attached to any receptacle or tank. The pump has a sort of cyclometer device which registers the quantity of fuel taken from the tank, four strokes to the gallon. A second register, which can be reset to zero, registers any specific quantity taken out at one time. Thus a dealer is always aware of the quantity of gasoline used and the amount that still remains in the tank. A return drip with check valve carries the overflow back into the tank and at the same time acts as a vent to release air and gases, and consequently explosions are avoided.

TIMER AND DISTRIBUTOR.—A single coil, non-vibrator timer, made in two sizes, for single-cylinder engines and for two, three, and four-cylinder motors, is made by the Monitor Speed Recorder Co., 274 Pearl street, Cambridge, Mass. It is marketed under the name McQuown Timer and Distributer. The contact is effected automatically by make-and-break mechanism, giving a very sudden contact which makes it practical for one coil to do the work of four coils with the ordinary timer. The instantaneous contact also prevents the coil from overwork due to long contacts. In the McQuown timer the length of contact can be adjusted to a nicety. If the contact is just long enough to actuate the coil, a still coil is declared to give the best results, one still coil doing the work of four vibrating coils, the same advantages applying with equal force when the timer is used in connection with a low-tension magneto. The timer illustrated will not stop with the contacts together, so there is no waste of batteries due to the circuit being closed while the engine is stopped, nor will it reverse, causing the engine to give several backward revolutions. As it makes and breaks contact automat-



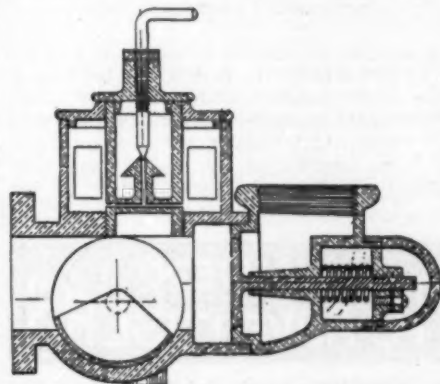
MCQUOWN TIMER AND DISTRIBUTER.

ically, an instantaneous contact is secured however slowly the engine is running, which facilitates starting and economizes battery current. By means of a push but-

ton on the dash the starting spark can be given. The timer can be secured to the engine frame and connected direct to the secondary shaft, or by means of suitable connections can be mounted on the dash. The timer mechanism is carried in a tight case in front of and connected to the distributor.

The Monitor Speed Recorder Co. also makes the Monitor speed registering instrument for use on automobiles, auto-boats, steamships, and railroad trains. The speed-indicating device is operated electrically by means of make-and-break mechanism, while a cyclometer registers the mileage and a dial revolved by clockwork receives the permanent record of the speed and miles traveled.

AUTOMATIC CARBURETER.—Flexibility is the chief characteristic of superiority claimed for the new Palmbla carbureter, which the North Chicago Machine Co., of North Chicago, Ill., is manufacturing and offering in the market. The construction of the carbureter is shown in the cross

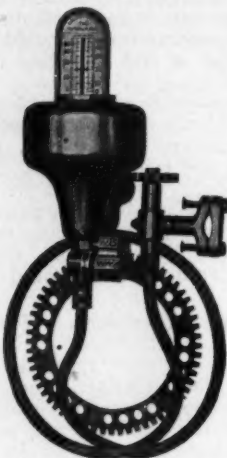


PALMBLA AUTOMATIC CARBURETER.

section drawing herewith. It has an annular float carried in a chamber surrounding the needle valve. Below is a throttle formed in the arc of a circle cutting off the air in the intake. At the right is a supplementary automatic valve which can be regulated by changing the tension on the coil spring. The makers assert that this carbureter is sufficiently flexible to allow it to meet the requirements of the convertible two or four-cycle motor in which, when changing from one cycle to the other, the fuel consumption in an instant is doubled or reduced one-half.

SPRINGFIELD SPEED INDICATOR.—The speed indicating instrument shown on the next page is the result of the efforts of the R. H. Smith Mfg. Co., of Springfield, Mass., to produce a durable and reliable instrument at a comparatively low price. As the illustration shows, the pointer rises and falls vertically over a scale of miles; for high-powered cars the scale is made to read to 80 miles an hour, while for less speedy cars the scale reads to 50 miles an hour. The principle of the centrifugal governor is made use of in the operating mechanism, and the instrument is gear-driven through a flexible shaft from a gear attached to one of the front wheels of the car. The bracket on the steering knuckle is adjustable to any American car. If a pebble or other hard object gets between the gears no harm will be done, as the gears will merely be forced aside, and will automatically return to mesh when the obstruction is out of the way. The indicating instrument is mounted on the dashboard by a

bracket which permits it to be set at any angle. Bearings are of steel and are automatically lubricated; the manufacturers state that every moving part is balanced. The case and trimmings are of phosphor bronze, and the case is water and dust proof.



SPRINGFIELD SPEED INDICATOR.

A feature that should be useful is that the dial is luminous, so that it can be read in the dark without a special light. The Springfield speed indicator may be had with or without an odometer.

AUTO SPECIALTIES.—A line of metal articles for automobile use is made by the

Dover Stamping and Manufacturing Company, 385 Putnam avenue, Cambridge, Mass. Among these is the funnel shown in the engraving herewith. It is provided with a fine mesh brass strainer near the small end and has a remarkable metal hoop, indicated by dotted lines, which sets on top above a piece of chamois skin, which it holds in place while the gasoline tank is being filled. The funnel is made in five sizes, from one pint to two gallon capacity, and coppered to prevent rusting. The fluted nozzle al-



DOVER FUEL STRAINING FUNNEL.

lows the gasoline to run into the tank quickly while the air escapes around the outside of the nozzle. Another specialty made by this company is a heavy galvanized steel drip pan to be placed on the floor of the garage under the car to catch all dripping gasoline and lubricating oil. These have their edges turned over a heavy iron rod that is bent around the corners, so that

there are no sharp edges or corners to injure the tires. They are made in two sizes—35 by 47 inches for runabouts and 35 by 95 inches for touring cars.

CLEANING LIQUID.—La-Lo is the name of a cleaning and polishing preparation sold by the Constant Company, 1024 Boylston street, Boston, Mass., for use on wood, metal, and leather surfaces, and also as a dust layer for floors. It is claimed for the preparation that it will clean and soften leather seats and cushions, and prevent them from hardening and cracking from exposure. Besides removing dirt and grease from woodwork and restoring the luster, it is said to prevent corrosion, rust, and tarnishing of metal that is cleaned and polished with it.

NEW TRADE PUBLICATIONS

THE HEATH Co., Saratoga Springs, N. Y. —An eight-page leaflet containing a dialogue on the features, action, and merits of the Heath dry gas carbureter, which is also illustrated.

HOLSMAN AUTOMOBILE Co., Monadnock Bldg., Chicago.—Catalogue of the Holzman automobiles, which are built on buggy lines and driven by gasoline motors through flexible steel cables. Full details of the machine are given.

COLUMBIA LUBRICANTS COMPANY OF NEW YORK, 78 Bond street, New York City.—Calendar for 1906 showing map of Vanderbilt cup race course for 1905 surrounded by halftone reproductions of the trophy and portraits of the donor and the winner.

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